Environmental Assessment

McCarthy Creek Temporary Access

United States Department of the Interior
National Park Service
Wrangell-Saint Elias National Park & Preserve
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1.0 PURPOSE AND NEED FOR ACTION

1.1 Purpose of Action

The National Park Service (NPS) is considering a request for temporary access to two inholdings on McCarthy Creek in the Wrangell-Saint Elias National Preserve (Appendix A). The applicants wish to transfer food, building supplies, and fuel to their inholding using a bulldozer (with blade generally up) and towing a trailer. The proposed access would follow a 14-mile bladed alignment between the town of McCarthy and their inholdings at Marvelous Millsite (USMS 1082-B) and Spokane Placer (USMS 875) with about 12.5 miles of the alignment on preserve lands. The NPS is considering a special use permit for the temporary access to last up to one year. The applicants indicate an application for permanent access right-of-way may be submitted at a later date. See Maps 1 and 2 for project location and access alignment.

This environmental assessment (EA) has been prepared to evaluate potential environmental impacts of the proposal and alternatives and to inform the public, regulatory agencies, and other interested parties. The EA findings and public comment will form the basis for a decision regarding the application. The NPS has analyzed alternatives and mitigating measures to minimize adverse environmental impacts to the park. This document has been prepared in accordance with the National Environmental Policy Act of 1969 (NEPA) and regulations of the Council of Environmental Quality (40 CFR Part 1500).

1.2 Need for Action

In 1980 the Alaska National Interest Lands Conservation Act (ANILCA) established Wrangell-Saint Elias National Park and Preserve. The McCarthy Creek area, proposed access alignment, and private lands lie within the preserve portion of the conservation system unit (Maps 1 and 2). ANILCA Title XI, Section 1111 addresses temporary access, and subsection (a) addresses General provisions for temporary access:

> *Notwithstanding any other provision of this Act of other law the Secretary shall authorize and permit temporary access by the private landowner to or across any conservation system unit, …or those public lands designated as wilderness study or managed to maintain the wilderness character or potential thereof, in order to permit the State or private landowner access to its land for purposes of survey, geophysical, exploratory, or other uses thereof whenever he determines such access will not result in permanent harm to the resources of such unit."*

Section 1111(b) addresses Stipulations and Conditions:

> *In providing temporary access pursuant to subsection (a), the Secretary may include such stipulations and conditions he deems necessary to insure that the private use of public lands is accomplished in a manner that is not inconsistent with the purposes for which the public lands are reserved and which insures that no permanent harm will result to the resources of the unit.*

Temporary access into and across public conservation system units in Alaska are further addressed in 43 Code of Federal Regulations (CFR) 36.12. Temporary access is defined as a limited period of time (up to one year from the issuance of a permit) for access that does not require permanent facilities. Subsection 36.12(d) states:

The appropriate Federal agency shall grant the desired temporary access whenever it is determined, after compliance with the requirements of NEPA, that such access will not result in permanent harm to the area's resources. The area manager shall include in any permit granted such stipulations and conditions on temporary access as are necessary to ensure that the access granted would not be inconsistent with the purposes for which the area was established and to ensure that no permanent harm will result to the area's resources and section 810 of ANILCA is complied with.

1.3 Background

1.3.1 Application History

The NPS Alaska Regional Director and staff met with the applicants to discuss access to their inholdings on June 20, 2003. The applicants had already used a bulldozer in the previous year without NPS authorization to clear an access alignment between the town of McCarthy and the Marvelous Millsite across federal and private lands. The applicant sent a brief email on July 8, 2003, to the NPS Regional Director and Park Superintendent indicating his interest in obtaining a permit for access. On July 10, 2003, the Park Superintendent responded to the applicant that the NPS would assist him with the necessary permit application, and he gave the applicant a contact person and phone number.

The applicant and the NPS have been unable to establish regular and reliable communications. The communication problems resulted in a dispute about the appropriateness of blading the alignment in question in 2002 without Federal or State permits or permission from private landowners and the delay in seeking a temporary access permit. In early October several airplanes transported supplies to the applicants' airstrip on the Spokane Placer site. The applicants believe a permit from the NPS to operate a bulldozer on an historic mining road is not needed. The applicants filed an action in the United States District Court for the District of Alaska seeking injunctive and declaratory relief to prohibit the NPS from requiring a permit. The District Court denied the request for injunctive relief and dismissed the case for lack of jurisdiction. The applicants appealed the dismissal to the Ninth Circuit Court of Appeals. Appendix A contains the correspondence between the applicants and the NPS regarding the access request.

1.3.2 NPS Organic Act, Act Amendments, and NPS Management Policy

The 1916 Organic Act directed the Secretary of the Interior and the NPS to manage national parks and monuments to:

"…conserve the scenery and the natural and historic objects and the wild life therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations." (16 U.S.C. 1.)

The 1978 amendments to the 1916 NPS Organic Act and 1970 NPS General Authorities Act expressly articulated the role of the national park system in ecosystem protection. The amendments further reinforce the primary mandate of preservation by stating:

"The authorization of activities shall be construed and the protection, management, and administration of these areas shall be conducted in light of the high public value and integrity of the National Park System and shall not be exercised in derogation of the values and purposes for which these various areas have been established, except as may

have been or shall be directly and specifically provided for by Congress." (16 U.S.C. 1-a1.)

The NPS Organic Act and the General Authorities Act prohibit impairment of park resources and values. The 2001 NPS Management Policies uses the terms "resources and values" to mean the full spectrum of tangible and intangible attributes for which the park is established and are managed, including the Organic Act's fundamental purpose and any additional purposes as stated in the park's establishing legislation. The impairment of park resources and values may not be allowed unless directly and specifically provided by statute. The primary responsibility of the NPS is to ensure that park resources and values will continue to exist in a condition that will allow the American people to have present and future opportunities to enjoy them.

The evaluation of whether impacts of a proposed action would lead to an impairment of park resources and values is included in this environmental assessment. Impairment is more likely when there are potential impacts to a resource or value whose conservation is:

- necessary to fulfill specific purposes identified in the establishing legislation or proclamation of the park;
- key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park; or
- Identified as a goal in the park's general management plan or other relevant NPS planning documents.

1.3.3 Park Purpose and Significance

In 1980 Congress passed and President Carter signed the Alaska National Interest Lands Conservation Act (ANILCA). ANILCA, Section 201(9) established Wrangell-Saint Elias National Park and Preserve (WRST), containing over 13 million acres of public lands to be managed for the following purposes, among others:

> *To maintain unimpaired the scenic beauty and quality of high mountain peaks, foothills, glacial systems, lakes and streams, valleys, and coastal landscapes in their natural state; to protect habitat for, and populations of fish and wildlife including but not limited to caribou, brown/grizzly bears, Dall sheep, moose, wolves, trumpeter swans and other waterfowl, and marine mammals; and to provide continued opportunities, including reasonable access for mountain climbing, mountaineering, and other wilderness recreational activities. Subsistence uses by local residents shall be permitted in the park, where such uses are traditional, in accordance with the provisions of title VIII.*

WRST is to be administered subject to valid existing rights, pursuant to the NPS Organic Act of August 25, 1916, as amended and supplemented, which established the National Park Service, and other applicable provisions of ANILCA.

Wrangell-St. Elias National Park and Preserve is the nation's largest national park unit (13.2 million acres), and designated wilderness (9.6 million acres). The park and preserve extend over a region of vast proportions and diverse environments, representing some of the most outstanding examples of Alaskan natural and cultural resources. Extensive high mountain terrain, enormous glaciers and ice-fields, active thermal features, large canyons, extensive wildlife populations, and major historic mining features represent the significance of the park and preserve. Wrangell-St. Elias National Park and Preserve, Kluane National Park in Canada, Glacier Bay National Park and Preserve, and British Columbia's Tatshenshini-Alsek Park are, together, the world's largest designated World Heritage Site—an area encompassing 28 million acres.

1.3.4 Other Applicable Laws, Regulations, NPS Policies, and Park Plans

1.3.4.1 Applicable Laws, Regulations, and NPS Policies

Cultural Resources Management Policy

NPS Director's Order #28 is issued pursuant to 16 U.S.C. (1 through 4). Numerous additional legal mandates as well as guidelines further support the issuance of this order. This order provides basic guidance for management of cultural resources through research, planning and stewardship as they apply specifically to major resource types: archeological resources, cultural landscapes, structures, museum objects, and ethnographic research.

Director's Order #28 is consistent with the Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation. These standards provide all federal agencies, state historic preservation officers, and other organizations with guiding principles for archeological and historic preservation activities and methods. They deal with preservation planning; identification, evaluation and registration of cultural resources; historical, architectural, engineering, and archeological documentation; and treatment of historic properties.

Every federal project that has the potential to affect cultural resources requires compliance with Section 106 of the National Historic Preservation Act and its implementing regulations, 36 CFR 800. These regulations provide a process to achieve compliance under this act by identifying, evaluating and mitigating adverse impacts to cultural resources. To facilitate the compliance process by accelerated review of certain specified common activities, the NPS negotiated a Programmatic Agreement (PA) with the National Council of State Historic Preservation Officers (NCSHPO) and the Advisory Council on Historic Preservation (ACHP). The park applies the procedural direction as outlined in the PA when dealing with compliance issues and this resource.

1.3.4.2 Park Plans

General Management Plan (GMP): The GMP (NPS 1986) addresses access to inholdings and rights of way. The GMP (page 16) notes that access to inholdings is guaranteed to nonfederal lands inside the park, but any such access is subject to reasonable regulations to protect the values of the public lands that are crossed. Appendix M of the GMP contains a list of alignments that the State of Alaska contends may be valid under RS 2477. Trail 16 (The McCarthy Creek-Green Butte Trail) is one of more than 100 trails identified by the State in WRST as a potential RS 2477 Right-of-Way (ROW). Identification of potential rights-of-way on the list and map does not establish the validity of the RS 2477 rights-of-way and does not provide the public the right to travel over them. Furthermore, identification of possible rights-of-way does not constitute the designation of alignments for off-road vehicle use.

Wrangell-Saint Elias National Park and Preserve Final Environmental Impact Statement (EIS) for the Wilderness Recommendation: This EIS (NPS 1988) describes designated and recommended wilderness for the park and preserve. NPS policies dictate that areas suitable and proposed for wilderness shall be managed as wilderness until Congress makes a final decision. Lands along McCarthy Creek to and slightly beyond the subject inholding are not now designated, recommended, or suitable wilderness.

The Final EIS, Cumulative Impacts of Mining, Wrangell-Saint Elias National Park and Preserve, Alaska: The NPS (1990) prepared this EIS as a result of a 1985 district court order to analyze the

cumulative impacts of mining in three national parks in Alaska, including Wrangell-Saint Elias National Park and Preserve. The McCarthy Creek area lies within the Kennecott Study area. This EIS describes the natural and cultural resources in the Kennecott area, including McCarthy Creek, and evaluates the cumulative impacts of mining to those resources. The Final EIS and Record of Decision called for continued processing of mining plans of operation pursuant to the Mining in the Parks Act and the implementing regulations at 36 CFR Part 9 until mining claims could be acquired by the NPS from willing sellers.

1.4 Issues and Impact Topics

Issues and impact topics identified during the internal scoping process for the McCarthy Creek Access EA form the basis for environmental analysis in this document. They reflect consideration of federal and state laws, orders, regulations, policies, and public concerns for the McCarthy Creek drainage. A brief rationale is provided for each issue and topic analyzed in the environmental consequences part of the EA (chapter 4). Issues and topics considered but not addressed in this document are also identified.

1.4.1 Effects on Soil and Substrate Resources

Concern was expressed that travel by a bulldozer with or without a trailer could disturb soils and sediments along the access corridor, causing erosion in places.

1.4.2 Effects on Vegetation

The blading and use of an access alignment to the Marvelous Millsite and Spokane Placer from the town of McCarthy could adversely affect woodland, riparian, and other vegetation in the McCarthy Creek valley. Use of heavy equipment could introduce exotic plant species to the Preserve.

1.4.3 Effects on Aquatic Resources and Fish

Repeated vehicle fords of streams could increase turbidity in this stream, and fuel and oil from containers being transported across or vehicles fording the streams could adversely affect water quality. Concern was expressed for potential effects on species of fish that occur and spawn in McCarthy Creek.

1.4.4 Effects on Wildlife

The use and blading of the proposed access alignment from McCarthy to the Marvelous Millsite and Spokane Placer could disturb and displace wildlife in the area. Moose, wolves, grizzly and black bears, and other small mammals and birds inhabit the area. The access activity could also impact wildlife habitat.

1.4.5 Effects on Cultural Resources

Use of heavy equipment for access in the McCarthy Creek area could disturb or damage archeological and historical resources in the area.

1.4.6 Effects on Visitor Use and Aesthetics

Concern was expressed for the potential effects on overnight backcountry users and day hikers that use the proposed access as a hiking trail. A concern was also expressed about visual impacts and noise from the use of heavy equipment where vegetation was recovering old scars on the land from previous mining-related activities and where natural quiet exists.

1.4.7 Effects on Safety

Avalanches, glaciation (ice-build-up along the alignment), and ice ledges along the creek could create hazards for travelers within the access corridor in the winter. In the summer, flooding of McCarthy Creek could be hazardous to travelers.

1.4.8 Cumulative Impacts

Concern was expressed about the additive effect of the proposed access with past and potential future mining, development, and use in the area. Cumulative effects are defined as the impacts on the environment that result from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.

1.4.9 Issues Considered but Dismissed from Further Consideration

The following issues are dismissed from consideration in this EA primarily because the requested access is limited in space and time.

1.4.9.1 Wilderness

The proposed access would not traverse designated wilderness nor is any of the access corridor proposed for future wilderness consideration. The proposed access alignment is far enough away from designated or proposed wilderness that impacts to wilderness are not likely.

1.4.9.2 Effects on Subsistence

Possible impacts on subsistence users and subsistence resources from a temporary access permit are considered negligible. An ANILCA Section 810 evaluation is included in appendix B.

1.4.9.3 Regional and Local Economy

The proposed access to private property for personal uses would have a negligible effect on the local and regional economy because expenditures at local and regional businesses pursuant to access and use of the private property would be negligible and no new jobs or bed tax would result.

1.4.9.4 Threatened and Endangered Species

The American peregrine falcon has been delisted and active nests are more than 2 miles from the project area. There are no other threatened or endangered species regularly occurring in the area.

1.4.9.5 Effects on Minority and Low-Income Populations

Executive Order 12898 requires federal agencies to incorporate environmental justice into their missions by identifying and addressing high and adverse human health or environmental effects of their programs and policies on minorities and low-income populations and communities. The proposed access would not result in disproportionately high direct or indirect adverse effects on any minority or low-income population or community.

1.4.9.6 Effects on Floodplains

NPS Director's Order #77-2 (Floodplain Management) implements Executive Order 11988 ("Protection of Floodplains"). These guidelines direct the NPS to protect floodplains by avoiding actions that could adversely affect floodplains or increase flood risks. None of the actions associated with the proposed access would adversely affect the floodplain resources and functions, nor would they increase the risk of flooding.

1.4.9.7 Wetlands

NPS Director's Order #77-1 (Wetland Protection) implements Executive Order 11990 ("Protection of Wetlands"). There are no naturally functioning wetlands in the footprint of the alignment; therefore, no wetland impacts are expected.

1.5 Other Permits and Approvals Needed to Complete Project

A Corps of Engineers Clean Water Act Section 404 Permit may be needed for any part of the project that traverses the waters of the United States. The Alaska Department of Environmental Conservation may need to issue a Certificate of Reasonable Assurance pursuant to the Clean Water Act Section 401**.** The Alaska Department of Natural Resources may require a Fish Habitat Protection Permit for crossing streams bearing fish.

Any permit issued by the NPS would be for access across federally managed public lands only. The applicants are responsible for obtaining permission to cross any other lands.

2.0 ALTERNATIVES

2.1 Introduction

This chapter presents a range of reasonable alternatives for providing temporary access to the applicants' inholdings on McCarthy Creek in the Wrangell-Saint Elias National Preserve. The range of alternatives includes a no action alternative and two action alternatives. Action alternatives include adopting the applicants' proposal as described in the SF-299 form and subsequent correspondence (Appendix A), and mitigating the applicants' proposal to minimize impacts and ensure protection of park resources and values. This chapter also describes those alternatives that will not be considered further (i.e., those that will not be analyzed fully in Chapter 4, Environmental Consequences).

2.2 Alternative A – No-Action Alternative

Under this alternative, the applicants would continue to access their inholdings on McCarthy Creek by snowmachine (during periods of adequate snow cover), airplanes, and non-motorized surface transportation methods – all methods allowed under ANILCA 1110 (a) with no authorization from the NPS. The NPS would not issue a special use permit for temporary access using a bulldozer and trailer to transport supplies to the applicants' two inholdings on McCarthy Creek.

The applicants successfully used snowmachines and sleds through the winter of 2002-2003 to commute between their private lands and to haul supplies from the town of McCarthy. The applicants' 160 acre Spokane Placer property has an airstrip that has been successfully used by the applicants for frequent flights through the summer and fall of 2003. The airstrip will accommodate the landing of moderately large bush aircraft with a payload of 2000 lbs per flight. (A Pilatus Porter or a single engine turbine Otter aircraft are available locally.) The applicants have used up to nine horses for spring, summer, and fall travel to and from their private property and the town of McCarthy. This alternative represents the continuation of this existing situation and provides a baseline for evaluating the changes and impacts of the action alternatives.

2.3 Alternative B – Applicants' Proposal

Under this alternative, the NPS would issue a special use permit for temporary access to the applicants' two inholdings on McCarthy Creek under the conditions described by the applicants' SF-299 form and subsequent correspondence (see Appendix A for complete details). The special use permit would be valid for up to one year after the date of issuance. Park staff would accompany the applicants along the alignment to monitor permit compliance.

Travel would occur in October, November, or during frozen conditions. A maximum of nine round trips (18 one-way passes), would be authorized between McCarthy and the applicants' inholding using a D-5 caterpillar or smaller bulldozer (or other comparable methods of transportation), and an approximately16-foot long trailer on wheels or skids (runners) depending on snow cover and ground conditions. Based on the alignment and the number of trips, McCarthy Creek and major tributaries would be crossed an estimated 300 times by a bulldozer and trailer. (The estimate of 300 channel crossings was calculated by multiplying the number of one-way trips [18] by the number of channel crossings per trip [16-18].)

Materials transported by the applicants would include food for the family, animal feed, clothing and other personal items, and building supplies (windows, insulation, tools, sawmill, cement,

foundation and roofing materials). Hazardous materials transported would include gasoline, propane, diesel, adhesives, and paint products.

The proposed primary alignment would run about 14 miles from the town of McCarthy to the applicants' inholdings at Marvelous Millsite (USMS 1082-B) and the Spokane Placer (USMS 875), with about 12.5 miles on preserve lands. The proposed alignment is delineated on Maps 2-6. This alignment includes the assumed primary alignment (black lines on the maps), as well as alternate alignments around the Green Butte Millsite and across from the Cutbank area approximately one mile south of Marvelous Millsite (red lines on the maps). Where there is barren floodplain terrain or adequate snow cover and frozen ground over a previously disturbed area, the NPS would allow deviations from the alignment to bypass private property and to avoid sensitive resources or open water.

Two sections of the alignment, where material has slumped onto it, would likely need to be bladed again: 1) near the upper tunnel bypass and 2) along Cutbank approximately one mile south of Marvelous Millsite. At the upper tunnel bypass, blading of soils would be within the existing disturbance, including side-cast. Other short sections of previously bladed side slopes or slopes with recent cut and fill may be bladed if the NPS employee agrees with the operator's suggestion or identifies a need to reestablish a level surface for the bulldozer, and assuming the sections have a durable coarse substrate.

The NPS permit would only provide authorization for access across federal public lands; it would not address permission to cross private lands. However, the proposed primary alignment crosses private property in three locations: at 5 Mile (US 6081), at Big Ben Millsite, and at Green Butte Millsite. If the applicants do not secure authorization to cross these private lands, a bypass around the properties at 5 Mile (US 6081) and Green Butte Millsite using the barren floodplain or existing alternate alignment, respectively, could be used (see Map 7). A bypass around the Big Ben Millsite using the frozen McCarthy Creek corridor in the winter also would be possible. No other bypass options would be available around Big Ben Millsite, because detouring around this property at any other time would require construction of a new alignment, creating a permanent facility that is inconsistent with the definition of temporary access (see 2.6.1 below for further explanation).

2.4 Alternative C – Frozen Ground and Mostly Frozen Water (*NPS Preferred*)

Under this alternative, the type of heavy equipment used (i.e., bulldozer and trailer, or other comparable methods of transportation), and materials transported would be the same as described under Alternative B (Applicants' Proposal). However, the NPS would issue a special use permit for temporary access to the applicants' two inholdings on McCarthy Creek only under specific terms and conditions necessary to protect park resources and values. The access alignment also would be somewhat different.

As under Alternative B, the special use permit would be valid for up to one year after the date of issuance.

The following key terms and conditions would be stipulated in the special use permit (the full list of terms and conditions may be found in Appendix C):

1. Travel pursuant to this permit would be authorized from the date of permit issuance to April 15, 2004; and from October 20, 2004 until either April 15, 2005 or the expiration of the permit (whichever comes first). Travel during the above identified periods would be

further conditioned upon the ground being frozen to a minimum depth of 12 inches and the existence of snow cover sufficient to protect the resources (typically more than 6 inches of snow. Stream crossings would utilize ice or snow bridges (these bridges must be strong enough to support permitted vehicles). Open water crossings require advance approval by the Superintendent or designee.

2. Before commencing access, the permittee would obtain all necessary State of Alaska permits and Federal permits. This permit would not authorize travel across private land. Applicant is responsible for securing permission to cross private land.

3. The Permittee shall notify the Superintendent 48 hours prior to the start of each trip.

4. A maximum of 18 one way trips by bulldozer, with or without a trailer, would be permitted.

5. The permittee and the NPS would jointly conduct a reconnaissance along the proposed alignment to identify and determine how to avoid problem areas before a bulldozer is moved across the selected alignment. The Superintendent or his/her designees may accompany the permittee on any or all trips to insure permit compliance and to direct alignment selection.

6. A number of fuel containment, spill prevention, discharge notification, and clean-up measures must be adhered to (see Appendix C for specifics).

The proposed primary alignment would run about 14 miles from the town of McCarthy to the applicants' inholdings at Marvelous Millsite (USMS 1082-B) and the Spokane Placer (USMS 875), with about 12.5 miles on federal public lands. The proposed alignment is delineated on Maps 2-6. This alignment includes the assumed primary alignment (black lines on the maps), as well as alternate alignments around the Green Butte Millsite and the Cutbank area (red lines on the maps). Where there is barren floodplain terrain or adequate snow cover and frozen ground over a previously disturbed area, the NPS would allow deviations from the alignment to bypass private property and to avoid sensitive resources or open water.

Under this alternative, only one section of the alignment near the upper tunnel bypass, where material has slumped onto it, would likely need to be bladed again. At this bypass, blading of soils would be within the existing disturbance, including side-cast. Other short sections of previously bladed side slopes or slopes with recent cut and fill may be bladed if the NPS employee agrees with the operator's suggestion or identifies a need to reestablish a level surface for the bulldozer, and assuming the sections have a durable coarse substrate. In contrast to what would occur under Alternative B, the applicants would be routed along the East side of McCarthy Creek in the area about one mile south of Marvelous Millsite, thus avoiding the Cutbank and eliminating the need for blading and side casting along this section.

The NPS permit would only provide authorization for access across federal public lands; it would not address permission to cross private lands. However, the proposed primary alignment crosses private property in three locations: at 5 Mile (US 6081), at Big Ben Millsite, and at Green Butte Millsite. If the applicants do not secure authorization to cross these private lands, a bypass around the properties at 5 Mile (US 6081) and Green Butte Millsite using the barren floodplain or existing alternate alignment, respectively, could be used (see Map 7). A bypass around the Big Ben Millsite using the frozen McCarthy Creek corridor in the winter also would be possible. No other bypass options would be available around Big Ben Millsite, because detouring around this

property at any other time would require construction of a new alignment, creating a permanent facility that is inconsistent with the definition of temporary access (see 2.6.1 below for further explanation).

2.5 Environmentally Preferred Alternative

The Environmentally Preferred Alternative is defined as "the alternative that will promote the national environmental policy" as expressed in §101 of the National Environmental Policy Act. Section 101(b) states "... it is the continuing responsibility of the Federal Government to…

- Fulfill the responsibilities of each generation as trustee of the environment for succeeding generations;
- Assure for all Americans safe, healthful, productive, and aesthetically and culturally pleasing surroundings;
- Attain the widest range of beneficial uses of the environment without degradation, risk to health or safety, or other undesirable and unintended consequences;
- Preserve important historic, cultural, and natural aspects of our national heritage, and maintain, wherever possible, an environment which supports diversity, and variety of individual choice;
- Achieve a balance between population and resource use which will permit high standards of living and a wide sharing of life's amenities; and
- Enhance the quality of renewable resources and approach the maximum attainable recycling of depletable resources."

The environmentally preferred alternative is Alternative A (No-Action Alternative), as this alternative most satisfies the national environmental goals. However, the permit terms and conditions described in Alternative C (NPS Preferred Alternative) would contribute to meeting environmental goals.

2.6 Alternatives Considered but Eliminated from Further Consideration

2.6.1 Bypasses Around Private Property Involving A Permanent Facility and New Disturbance

The NPS did not consider a bypass around private property at Big Ben Millsite along an abandoned alignment referred to as the Wigger Alignment. This bypass would require 300 to 1,100 linear feet of new construction through pristine (undisturbed by previous activity) vegetation, as well as 750 to 3,000 linear feet of reconstruction along the old, and now overgrown, Wigger Alignment. This bypass would, therefore, conflict with both the 43 CFR 36.12(a)(2) definition of special use ("...access that does not require permanent facilities"), and with Section 1111 of ANILCA Title XI that "… such access will not result in permanent harm to the resources of such unit."

Table 2.1. Comparison of the Alternatives

	Alternative A – No- Action	Alternative B: Applicants' Proposal	Alternative C: Frozen Ground and Mostly Frozen Water (*NPS Preferred*)
Special Use Permit for Temporary Access	No permit issued; applicants would continue to access their property by snowmachine, airplane, and nonmotorized surface transportation as allowed by ANILCA.	Permit issued for travel by bulldozer and trailer in October and November or during frozen conditions.	Permit issued for travel by bulldozer and trailer, but with additional terms and conditions, including travel over frozen ground with adequate snowcover, and travel across mostly frozen water.
Proposed Primary Alignment	No primary alignment delineated as applicants may use above ANILCA-authorized access methods throughout the McCarthy Creek valley.	Proposed primary alignment extends ~14 miles from McCarthy to Spokane Placer, crossing private lands at 4 places.	Same as Alternative B except primary alignment moves to East side of McCarthy Creek across from the Cutbank area one mile south of Marvelous Millsite.
Alternate Alignment	No alternate alignments delineated as applicants may use above ANILCA-authorized access methods throughout the McCarthy Creek valley.	Alternate alignments include the East side of McCarthy Creek across from the Cutbank area one mile south of Marvelous Millsite, and an alignment further west of Green Butte Millsite.	The only alternate alignment is one further west of Green Butte Millsite. The alternate alignment around the Cutbank area becomes the primary alignment under this alternative (use the Cutbank alignment would not be permitted).
Possible Private Property Bypasses	Applicants may or may not secure authorization to cross private property.	Bypasses may be needed around private property if necessary because authorization to cross private land is not secured.	Same as Alternative B.

Table 2.2. Summary Impacts of the Alternatives

	Alternative A – No- Action	Alternative B: Applicants' Proposal	Alternative C: Frozen Ground and Mostly Frozen Water (*NPS Preferred*)
Soil and Substrate	Minor adverse impacts to soil and substrate resources.	Minor adverse impacts to soil and substrate resources from bulldozer operations and possible fuel spills.	With appropriate management controls, there would be only negligible to minor adverse impacts to soil and substrate resources.
Vegetation	Minor additional adverse impacts to vegetation resources along the access alignment from McCarthy to the applicants' inholdings in upper McCarthy Creek.	Minor to moderate adverse impacts to vegetation resources in the valley if the existing alignment is used. The most damaging impacts would be the churning of soils and destruction of the existing roots and ground cover mat, which would set back vegetation succession by 10-20 years.	Minor additional adverse impacts to vegetation resources. The most damaging impacts would the potential impacts associated with accidents such as fuel spills or the dozer sliding off the alignment.
Aquatic Resources and Fish	The slight increase in snowmachine or horse use would have negligible effects to fish habitat and fish population viability. Fish populations would continue to recover from the effects of past actions.	Alternative B demonstrates the potential for a high risk of a major impact to the Dolly Varden population in McCarthy Creek.	Minor impact on fish and fish habitat.
Wildlife	Alternative A would result in negligible long-term and minor short-term losses of wildlife habitat, and temporary displacement of wildlife species. The risk of human-bear conflicts and bear mortality would be minor to moderate between the period of den emergence and winter dormancy; during winter dormancy there would be no risk. Effects on other wildlife populations would be negligible.	Alternative B would result in negligible long-term and minor short-term losses of wildlife habitat, and temporary displacement of wildlife species. The risk of human-bear conflicts and bear mortality would be minor in October prior to winter dormancy; during winter dormancy there would be no risk. Effects on other wildlife populations would be negligible.	Alternative C would result in negligible long-term and minor short-term losses of wildlife habitat, and temporary displacement of wildlife species. There would be no risk of human-bear conflicts and bear mortality because temporary access would occur during bears' winter dormancy. Effects on other wildlife populations would be negligible.
Cultural Resources	Minor impacts on cultural resources.	Minor impacts on cultural resources.	Minor impacts on cultural resources.

	Alternative A – No-Action	Alternative B: Applicants' Proposal	Alternative C: Frozen Ground and Mostly Frozen Water (*NPS Preferred*)
Visitor Use and Aesthetics	Alternative A would result in minor adverse effects on visitor use and aesthetics.	Alternative B would result in minor adverse effects on visitor use and aesthetics.	Alternative C would result in minor adverse effects on visitor use and aesthetics.
Safety	An assessment of the avalanche risk has not been undertaken by an avalanche expert, but based upon the location of known and potential snow avalanche zones and our general knowledge of the valley there is a minor to moderate safety concern for individuals traveling along the alignment, and a major concern in those 5 areas listed above during periods of high avalanche danger. There would be no increase in the safety concerns posed by continued access with snow machine, horse and fixed wing aircraft. All these activities in remote mountain setting have inherent risks. In summary Alternative A – No-Action would not pose any additional increase to safety conditions beyond the existing conditions.	There is in a minor to moderate increase in risks to safety under this alternative due to the window of operations from aufeis, flooding and snow avalanche. These would have only a minor additional adverse impact on safety conditions if proper reconnaissance, alignment selection and avoidance of dangerous reaches and periods are integrated into operation while transporting of materials and driving the bulldozer within McCarthy Creek Valley.	There is in a minor to moderate increase in risks to safety under this alternative due to the window of operations from aufeis, flooding and snow avalanche. These would have only a minor additional adverse impact on safety conditions if proper reconnaissance, alignment selection and avoidance of dangerous reaches and periods are integrated into operation while transporting of materials and driving the bulldozer within McCarthy Creek Valley.
Impairment Of Park Resources That Fulfill Specific Purposes Identified In The Park And Preserve Enabling Legislation Or That Are Key To The Natural And Cultural Integrity of the Park and Preserve.	The level of effects would not result in impairment to park resources that fulfill specific purposes identified in the park and preserve enabling legislation or that are key to the natural and cultural integrity of the park and preserve.	The Dolly Varden in McCarthy Creek are likely an individual fish stock that has specifically evolved to conditions in McCarthy Creek. Our existing knowledge of migratory Dolly Varden populations within the Park is incomplete, but based upon the available information this population appears to be unique within the Park. The enabling legislation for Wrangell-St. Elias National Park/Preserve directs the NPS to manage the Park to …protect habitat for; and populations of; fish and wildlife. Alternative B may result in a loss of viability to a unique Dolly Varden population which would be a permanent impact to the natural integrity of the Park. Therefore, if Alternative B is selected, the purpose and values for which the Park/Preserve was established could be impaired.	The level of effects would not result in impairment to park resources that fulfill specific purposes identified in the park and preserve enabling legislation or that are key to the natural and cultural integrity of the park and preserve.

3.0 AFFECTED ENVIRONMENT

This chapter describes the access corridor in general, as well as the following resources: soils and substrate; vegetation and wetlands; aquatic habitat and fish; wildlife; cultural resources; and visitor use and aesthetics within Wrangell-Saint Elias National Park and Preserve that may be affected by the alternatives should they be implemented. The specific subjects covered in this chapter reflect the impact topics identified in Chapter 1 of this document, the Purpose and Need for Action.

3.1 Overview of Access Corridor

3.1.1 Geographic Overview

A description of the physical character of the access corridor area is best provided by U.S. Geological Survey Water-Resources Investigation Report 93-4078 entitled: Hydrologic and Mass-Movement Hazards near McCarthy, Wrangell-St. Elias National Park and Preserve. That document is hereby incorporated by reference. "McCarthy Creek originates from glaciers along the south slope of the Wrangell Mountains. Below its origin along the base of ice-core moraines of McCarthy Creek Glacier, the braided stream flows southward over a 300-600–foot wide alluvial flood plain. Between 12.3 and 5 miles the stream flows through a series of bedrock canyons before turning west over an alluvial floodplain." (Jones, S., and Glass, R, 1993).

The access corridor is located within the McCarthy Creek drainage, with a watershed of approximately 77 square miles. The McCarthy Creek basin was formed by historic large-scale valley glaciation resulting in a classic "U" shaped valley cross-section. The McCarthy Creek Glacier, a remnant of that glacial system, provides feed waters for the watershed along with two major tributaries, East Fork and Nikolai Creek. In recent times McCarthy Creek has cut through bedrock in its upper reaches and glacial deposits along the valley floor to form an incised "V" shaped valley with a dynamic floodplain and a system of alluvial terraces. Steep valley side slopes, with associated talus, rock glaciers, landslides and avalanche areas, and more gently sloping fluvioglacial and glaciolacustrine features contribute additional elements to the area's landscape.

3.1.2 Ecological Overview

The ecosystem patterns of the McCarthy Creek valley are representative of the patterns of the greater Chitina valley. McCarthy Creek runs in a narrow barren floodplain, bordered by recent terraces with riparian forest and shrub types. Above the terraces are steep forested side slopes and uplands. The mountain sides support willow and alder thickets, rising to an alpine zone with tundra, bedrock and talus and small glaciers. Vegetation types are described in greater detail in Allen and Wesser, 1999.

3.1.3 Safety Hazards Overview

3.1.3.1 Snow Avalanches

"Snow avalanching occurs during winter and spring on all slopes delineated as landslide prone areas, within all steep-walled canyons and along the cirque headwalls of tributary streams, rock glaciers and glaciers" in the McCarthy Creek watershed. (Jones, S., and Glass, R, 1993). The access corridor upstream of Green Butte Millsite has landslide prone areas delineated along its

entire length. During the winter of 2002/2003 large avalanches crossed or nearly crossed the access alignment upstream of Green Butte Millsite in at least five locations. These include two proximal to Big Ben Millsite, one on the Eastside alignment opposite the Cutbank, and two within one-half mile downstream of the Marvelous Millsite.

3.1.3.2 Aufeis (icing)

"Aufeis is a mass of ice that forms by the overflow and subsequent freezing of sheets of surface water or emerging ground water" (Jones, S., and Glass, R., 1993). There are a minimum of 10-20 locations along the alignment where water issuing from seeps or flowing in small side drainages crosses the alignment and may result in aufeis development during winter months. Aufeis also forms within stream channels and may be present at any of the 19 known crossings. "Extensive aufeis accumulations occur in McCarthy Creek basin during winter months" (Jones, S., and Glass, R., 1993).

3.1.3.3 Flooding

"Low-lying areas along McCarthy Creek have a history of flooding and flood damage. Floods in the McCarthy Creek basin are commonly caused by intense and prolonged rainfall but may result from rainfall, snow melt or formation and subsequent failure of landslide dams, snow avalanche dams and sudden release of channel blockage by snow and ice" (Jones, S., and Glass, R., 1993). The "1980 flood" (4500 cfs) covered an area estimated at more than 800 acres within the McCarthy Creek corridor floodplain. McCarthy Creek and side tributary flood magnitudes, frequency and potential causes are described in USGS WRI 93-4078. Rainfall and snow melt flood frequency determinations for McCarthy Creek near McCarthy indicate that the "fifty year" and "100 year" floods are approximately 3900 cfs and 4300 cfs. (Jones, S., and Glass, R., 1993).

3.2 Soils and Substrate

The access corridor is largely confined within four major terrain features within the watershed. These are: floodplains, alluvial terraces, side slopes and uplands. There are also micro features along the access corridor. These include seep zones and small tributaries; mass wasting/ deposition areas consisting of land slides, mudflows and avalanche zones; and under-cut banks.

Floodplains are the active alluvial erosion and deposition features associated with McCarthy Creek and its major tributaries, East Fork Creek and Nikolai Creek Floodplain deposits consist of poorly sorted silt, sand, gravel, cobble and large boulders. The most active floodplains are bare gravel but areas that are less frequently flooded are lightly vegetated and have a small accumulation of organic matter on their surface. The surface of the alignment within this terrain feature is largely bare gravel.

Terraces are higher, poorly sorted alluvial deposits generally not subjected to flooding. These sites are well drained. They have surface vegetation in various stages of growth depending upon an individual site's past flooding history. Organic surface soil horizons develop slowly on these sites, but are often well developed. There is no subsurface soil development. The surface of the alignment across these features range from vegetated to bare mixed gravels and sands.

Side slopes are relatively steep features located along the edges of terraces or at the base of steep mountain slopes. They consist of a variety of deposits including alluvium, glacial deposits and colluvium. Because of their steep slopes these sites are generally well drained. These features are unstable. At higher elevations slopes fail in mass wasting events such as landslides and

mudflows. These events deposit sediments on lower side slopes, terraces and floodplains. If undisturbed, side slopes are usually vegetated and develop organic surface layers and a shallow mineral subsoil horizon. The alignment usually occupies an excavated bench cut across the side slope. The surface of the bench may be lightly vegetated or consist of bare gravel intermixed with fine textured material.

Uplands are gently sloping fluvial and glaciolacustrine deposits located along the broader floor of the lower valley –generally below Green Butte Millsite. They consist of poorly consolidated sand and silt with some clay, granules, pebbles, and boulders. Many of the mass wasting features (landslides and mudflows) in the lower valley originate in these materials. The upland unit is generally moderately well drained but areas in depressions and along minor tributaries may be poorly drained. In general, uplands are heavily vegetated and have thick well developed organic surface horizons and a distinct, relatively deep subsurface mineral horizon. The body of the soil is predominately fine textured with high percentages of organics, silt and clay. The surface of the alignment is generally stripped of woody vegetation leaving lighter grasses and forbs. Woody debris covers some areas while others have been stripped to their organic or mineral surface.

3.3 Vegetation and Wetlands

3.3.1 Vegetation and Wetlands

Floodplains along McCarthy Creek include the active floodplain and recently formed terraces (Figure 3.1). The active floodplain is scoured by floodwaters every year or two, and is

Figure 3.1. Floodplains of McCarthy Creek, view downstream. Immediately left of the stream channel is the active floodplain. Further left is a sparsely vegetated terrace, with *Dryas* and willows. The forested terrace at extreme left is an older terrace with cottonwood and scattered white spruce.

predominately barren gravels and cobbles with scattered forbs and willow shoots (*Salix spp*). Early successional terraces (5-15 years old) are sparsely vegetated with *Dryas drummondii* mats, miscellaneous forbs and low willows. The existing access alignment in these areas is almost totally barren, with scattered *Dryas* and forbs along the center ridge.

Some areas of the valley floor have older, forested terraces. Terraces less than approximately 100 years old have early riparian forests of cottonwood (*Populus blasamifera)* and white spruce saplings (*Picea glauca*), with an understory of willow, soapberry (*Sheppardia canadensis*), and moss and forb ground cover. Older terraces support mature white spruce forests with scattered cottonwood trees, tall shrub understory and ground cover with a rich vascular flora and thick moss layer (Figure 3.2). The access alignment across these terraces varies from sparse forbs and shoots across most of the width to largely barren soil with gravel patches and woody debris, with a center strip of early successional forbs and cottonwood shoots regrowing from the roots of sheared saplings. Lower reaches of the valley have several segments of landslide deposition. Material from landslides dumps onto the flat terrace, overriding the ground cover of the riparian forest. These deposition zones are barren fine-grained mud with protruding clumps of willows and trees. The alignment in these areas is barren mud and standing water.

Figure 3.2. Older forested terraces by McCarthy Creek. The higher terrace in the right side of the figure is open white spruce with tall shrub understory. A small piece of a younger, lower terrace is at the extreme left center, showing cottonwood and white spruce forest.

Steep side slopes rise above the terraced valley floor, forested with mature white spruce forest similar to the old terraces, or vigorous stands of young birch with an understory of shrubs such as highbush cranberry (*Viburnum edule*), soapberry and forbs including fireweed (*Epilobium*

angustifolium) and lupine (*Lupinus arcticus*). The existing access footprint in these areas is generally two barren soil treads with a center strip of forbs (fireweed, dogwood (*Cornus Canadensis)),* grasses and willow and alder (*Alnus crispa*) shoots 6-12" high which have sprouted from sheared tall shrubs.

The existing alignment traverses several upland sections above the side slopes, which are located on the floor of the glacially carved valley before McCarthy Creek incised into its current floodplain (Figure 3.3). These areas are gentle slopes with mature white spruce forest and patches of wetlands. The white spruce forests have been recently infested with spruce bark beetles, so that many of the older trees are dead, leaving spruce generally less than 100 years old, with scattered old birch and an understory of tall willow and alder. Wetlands have scattered black spruce (*Picea mariana*), low willows and ground layer of mosses and low ericaceous shrubs and forbs. The alignment in the upland zone tends to have vegetation across much of the width, mostly grasses, forbs and willow shoots. Where the alignment crosses short stretches of wetter organic soils or small streams, it is rutted, muddy and sparsely vegetated with horsetail, forbs and grasses.

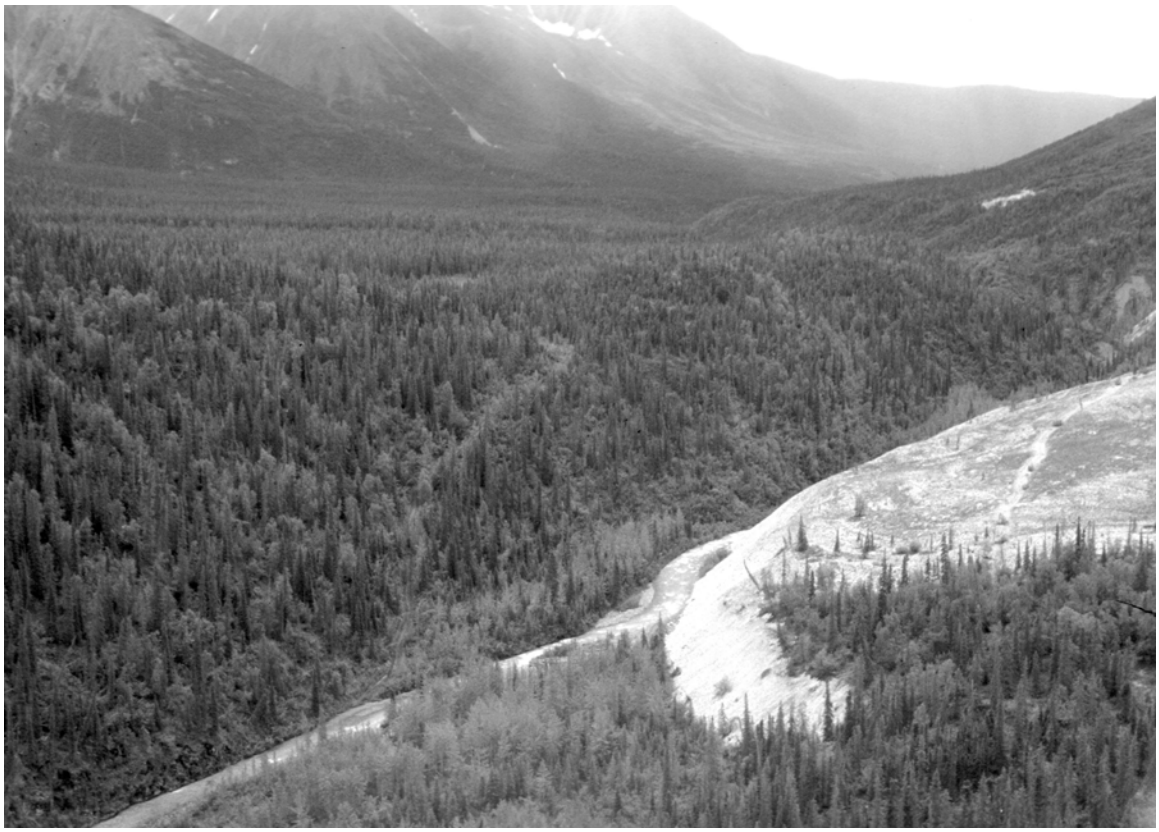


Figure 3.3. Uplands and sideslope terrain units. The floor of the "U" shaped glacial valley is evident across the middle of the figure, with the later incised valley of McCarthy Creek running from left to right below the rock glacier on photo right. The incised valley walls form the steep sideslope terrain units. The alignment traverses from the stream up onto the upland unit through the lower center of the image. The upland unit is the gently sloping forested area at photo center.

There are no naturally functioning wetlands in the footprint of the alignment. Small drainages occur sporadically in most of the terrain types discussed above. The rivulets are less than three feet wide, and the banks are vegetated with thick mosses, and moisture tolerant forbs like

cloudberry *(Rubus chamemorous), Parnassia palustris*, and coltsfoot (*Petasites frigidus)*. Seeps occur where the stream or the access alignment cut the groundwater flow. The vegetation on the alignment in seep and stream areas reflects the underlying soils. Streambanks are rounded off and generally denuded and muddy where the stream crosses the alignment. Seeps are often captured by the alignment and flow along it. Areas of small seeps tend to be muddy and rutted, with horsetail *(Equisetum arvense)* and grasses in the center strip. A prominent seep area on a birch side slope flows down the barren gravel alignment.

3.3.2 Non-native Plants

The existing alignment has several locations with non-native species, predominately dandelions (*Taraxacum officinale*) and plantain (*Plantago major*). Additionally, there are several species of agricultural crop and pest plants in the cleared area immediately to the east of the alignment along the Marvelous Mill site.

3.4 Aquatic Resources and Fish

3.4.1 Watershed and Aquatic Habitat

McCarthy Creek originates from glaciers along the south slope of the Wrangell Mountains and runs naturally turbid during the summer months. Its waters tend to clear during non-summer months. Below its origin along the base of the moraine of the McCarthy Creek glacier, the braided stream flows southward over a 300-600 foot wide flood plain and has an average gradient of 2.3 percent. Between stream miles 12.3 and 5, the stream flows through a series of bedrock canyons before turning west over an alluvial floodplain. Stream gradient, between stream miles 5 and the mouth, averages 1.9 percent. Peak flows range 2080 to 4500 cubic feet per second with average water velocities ranging from 7 to over 12 feet per second. Ridges enclosing the McCarthy creek watershed are from 6000 to 9000 feet in elevation. The mouth of McCarthy Creek is approximately 1360 feet in elevation. Glaciers and perennial snowfields presently cover about 4 percent of the McCarthy creek watershed (Jones and Glass, 1993).

McCarthy Creek is a third order tributary stream that flows into the Kennicott River in the vicinity of the community of McCarthy. The Kennicott River is tributary to the Nizina River; the Nizina River is tributary to the Chitina River; tributary to the first order Copper River that flows into the marine waters of Prince William Sound. Flood plains along McCarthy Creek and its tributaries are frequently flooded and are prone to rapid erosion and deposition during intense rainfall and periods of rapid snowmelt. The 1980 flood event covered or created nearly 850 acres of flood plain. Sediments from continual mass wasting accumulate in stream channels and are mobilized during floods. Severe lateral erosion, scour and deposition occur during floods.

The Final EIS, Cumulative Impacts of Mining, Wrangell-Saint Elias National Park and Preserve, Alaska states placer mining, drift mining and access alignments have caused disturbance in the McCarthy Creek drainage. During the warm summer months, suspended sediments are in relatively high concentrations. Aquatic invertebrates and algae were observed in upper and lower McCarthy Creek in 1986. Large woody debris is present within the active channel (Figure 3.6). Suitable sized salmonid spawning gravels are present within McCarthy Creek.

Fish habitat in McCarthy Creek contains many low gradient riffles and scour pools (Overton and others, 1997) as well as many high gradient riffles. Numerous off-channel habitats such as side channels and beaver ponds are present at low flows. The beaver ponds near Green Butte Millsite appear to provide important rearing habitat. These beaver ponds are connected to the main

channel of McCarthy Creek by a small stream flowing out of the ponds. Channel downcutting could result in a loss of connectivity to these ponds, substantially changing the quality and quantity of summer rearing habitat available to fish occupying McCarthy Creek.

Large woody debris appears to provide cover for fish in McCarthy Creek during a range of flows. Large woody debris is likely particularly important as it provides cover and low velocity areas during high flow periods. Large woody debris jams create off channel habitat , such as low velocity side channels that are extremely important to rearing, juvenile fish, particularly during high flow events. Large woody debris also aids in the development of deep pool habitat in the main channel which provides extremely important overwinter habitat. Large woody debris is also an important source of nutrients for macroinvertebrates. While large woody debris levels are unknown, a qualitative review from a helicopter suggests that large woody debris levels are currently high enough to positively affect fish habitat but that fish habitat would likely continue to improve if large woody debris levels increased. If large woody debris levels decreased measurably, a corresponding decrease in fish habitat quantity and quality would also be expected.

Plunge pools a meter or more in depth were observed during the October 2003 sampling efforts. These pools provide important overwinter habitat.

Many of the stream gravels in McCarthy Creek are large and may be difficult for fish exhibiting resident life histories to move while spawning, smaller gravels are present at some sites in large enough quantities to support spawning. Peak flows and velocities in McCarthy Creek are undoubtedly substantial enough to transport smaller spawning gravels. Interstitial spaces (spaces among large substrate particles) provide important habitat for both fish and their prey, including many macroinvertebrate species.

High summer flows may limit the success of Spring spawning fish species by transporting stream channel substrate containing developing eggs. High levels of suspended sediments during summer flows may physically damage or cover developing eggs in relatively stable substrates. However, flows occurring in non-summer months are lower velocity, contain relatively little suspended sediment, and appear to provide an environment which supports spawning by Fall spawning species such as Dolly Varden.

Gravel substrate areas observed during the October 2003 fish sampling effort appear embedded with fine (< 2 mm diameter) sediment. Spawning Dolly Varden will clean these areas during the process of spawning, allowing for increased interstitial water flow to oxygenate the developing eggs. Spawning from September to early November (usually October) with alevins emerging from the gravels in late April to mid-May (Scott and Crossman, 1973), Dolly Varden are well adapted to surviving in streams with naturally occurring peak flows during summer months. A diverse range of life histories, including resident, fluvial, and anadromous forms, allow the species to persist even when their natal streams provide less than optimal rearing conditions during some years. However, human caused disturbances, such as the mobilization of fine sediments during low flow periods while eggs or alevins remain in the gravels, impact all life history forms and can affect the success of Dolly Varden populations.

Nutrients, large woody debris, and substrate, including spawning gravels, are transported to the stream by landslides and debris torrents. Hydrologic and mass-movement hazards in the McCarthy Creek watershed are well documented by Jones and Glass (1993). Eroding stream banks, such as those found in the area referred to as Cutbank, also contribute nutrients, large woody debris, and substrate. Past actions, such as road and trail construction, have interrupted the transportation of these materials to stream channels. Prior to 2002, the dynamic nature of

many of these landslides or debris torrent alignments had covered the existing alignment and restored the natural functions of these areas. However, renewed use, including the blading of many of these areas using a bulldozer has again interrupted the contribution of large woody debris and substrate materials to the stream channel. Left undisturbed these areas will likely recover in the next 10 to 100 years.

3.4.2 Aquatic Populations

Dolly Varden (*Salvelinus malma)* occur in the lower section of McCarthy Creek (ADFG Williams, pers. Comm.. 1982 in final environmental impact statement cumulative impacts of mining in WRST volume 1). The Creek has subsequently been surveyed twice by National Park Service personnel to determine the presence or absence of fish species. It was first surveyed in 2001. The 2001 sample site was located near the stream mouth. Juvenile Dolly Varden were captured during this survey.

In October 2003, a second sampling event by National Park Service staff was conducted to determine the presence or absence of fish species in other areas of McCarthy Creek. Because of its short duration, this sampling event is not adequate to prove the absence of any fish species. However, this approach does document the presence of any fish species observed or captured.

No additional fish species other than Dolly Varden are known to occur in McCarthy Creek. However, no known fish passage barriers exist between the Chitina River and McCarthy Creek in the vicinity of Spokane Placer. Additional fish species known to occur in the Chitina River drainage that could potentially inhabit McCarthy Creek include chinook and coho salmon, steelhead/rainbow trout, arctic grayling, and slimy sculpin. Existing fish presence data for McCarthy Creek is based upon brief sampling efforts at a few sites within the watershed.

Table 3.1 Fish sample sites in McCarthy Creek, 2001 and 2003.

STREAM	**SITE**	**GPS**	**Sample Year**
McCarthy Creek	Green Butte Millsite	N 61.496 W142.785	2003
McCarthy Creek	Nikolai Confluence	N 61.442 W 142.776	2003
Nikolai Creek	Reach 1	N 61.444 W 142.773	2003
McCarthy Creek	Upstream NPS Boundary	N 61.414 W 142.874	2003
McCarthy Creek	Near mouth	N 61.431 W 142.924	2001

Dolly Varden were also captured at all sample sites in 2003. Captured fish ranged from 30 to 432 mm in length with a mean of 95.8 mm (SE=51.3 mm). Length ranges for each site are summarized in Table 3.2. Length frequency analysis suggests that sampled fish lengths were well distributed around 55 mm and 115 mm (Figure 3.5). One large (432 mm) male was in spawning condition when captured and appears to be either an anadromous or fluvial individual. This is the largest Dolly Varden sampled in the Interior portion of the Park (excluding Yakutat District) to date. Dolly Varden appear to be present throughout McCarthy Creek and the lower portion of Nikolai Creek. Based upon aerial observations in 2003, the East Fork of McCarthy Creek

appears to provide fish habitat similar to that in Nikolai Creek. An anadromous stream nomination was submitted to the Alaska DNR based upon this information. Nominations

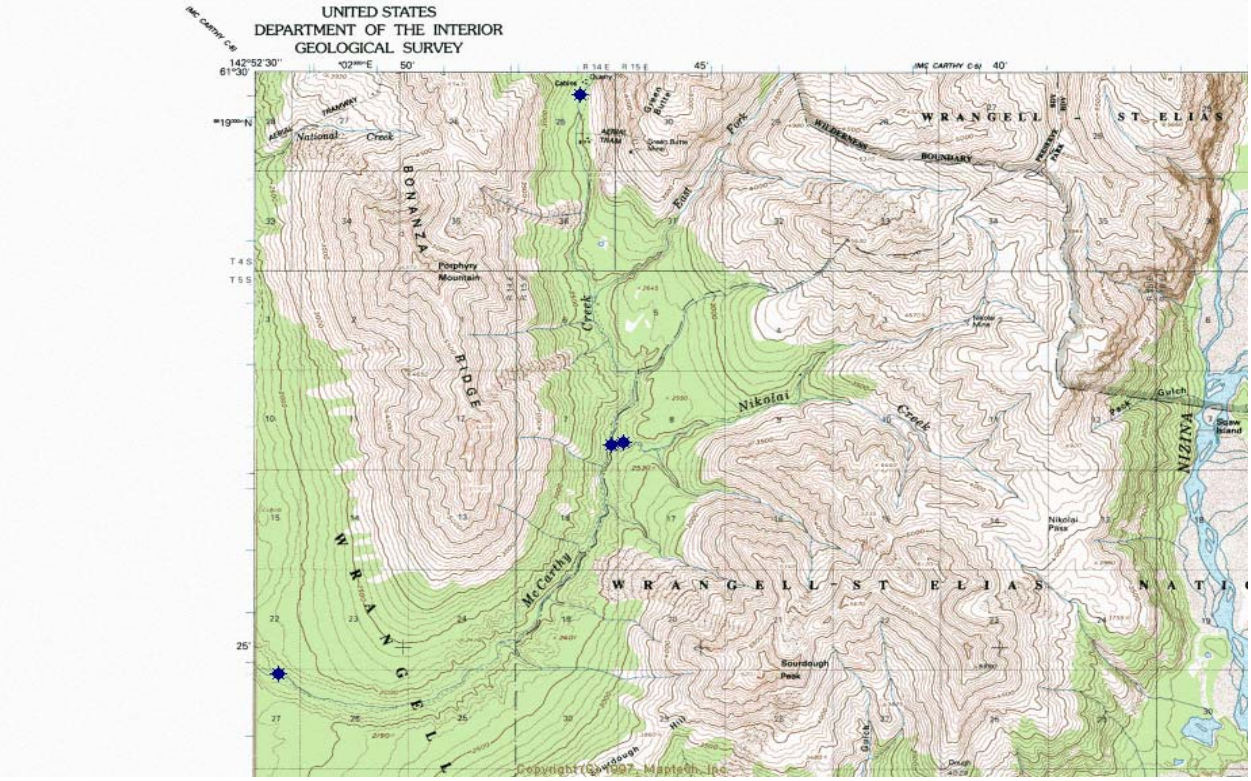


Figure 3.4 Fish sample sites in McCarthy Creek, 2001 and 2003.

received since July of 2003 will not be considered by DNR until the 2005 regulatory cycle so regardless of any finding of anadromous fish in McCarthy Creek the stream will not be listed in State regulation as an anadromous stream prior to the 2005 regulatory cycle. At this time, due to the absence of any other known anadromous Dolly Varden populations within the McCarthy quadrangle, DNR has stated documentation of additional anadromous Dolly Varden within McCarthy Creek would be needed to support an anadromous determination for McCarthy Creek.

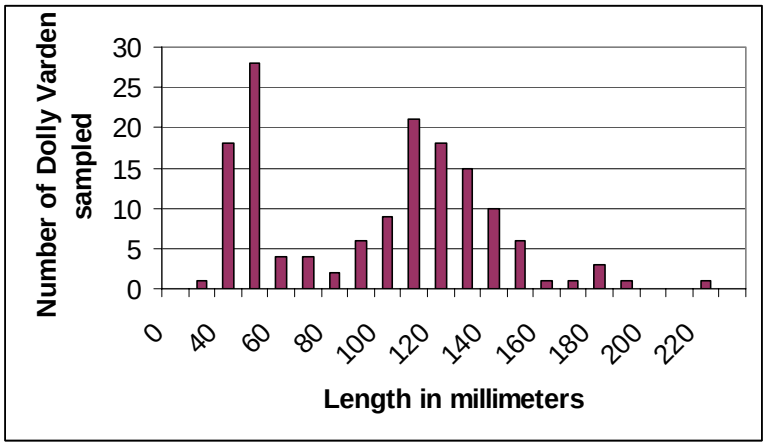
Length frequency data suggests three age classes of Dolly Varden within McCarthy Creek. Dolly Varden less than 90 mm in length appear to be age 0+; Dolly Varden over 90 mm but less than 160 mm; age 1+ fish (Figure 3.5). Eight fish were sampled that were over 160 mm in length, these fish are likely 2+ or older fish. Although spawning activity was not observed, the numerous small (less than 50 mm) individuals that were sampled strongly suggests that spawning is occurring within McCarthy Creek.

Sampling McCarthy Creek in October 2003 found that a Dolly Varden population is present. This corroborates prior sampling events. One Dolly Varden sampled is believed to be an anadromous specimen. The condition of both the large male sampled and the presence of numerous small individuals suggests Dolly Varden spawn and rear in McCarthy Creek. Fish habitat in McCarthy Creek does support a viable spawning population of Dolly Varden.

Table 3.2. Fish sample size and length data by sample site.

SITE	Sample Size	Minimum length (mm)	Average Length (mm)	SE	Maximum Length(mm)
Green Butte	63	66	114.8	16.8	149
Nikolai Confluence	39	35	68.2	67.4	432
Reach 1	14	30	122.9	79.1	250
Upstream NPS Boundary	27	40	70.7	34.9	157
Near mouth	8	84	117	34.8	180

Figure 3.5. Length frequency of Dolly Varden in McCarthy Creek (all sites).



Sampling of McCarthy Creek in 2001 and October 2003 found that a Dolly Varden, *Salvelinus malma*, population is present in McCarthy Creek. One sampled individual is considered potentially an anadromous specimen. The condition of both the large male sampled and the presence of numerous small individuals suggests Dolly Varden spawn in McCarthy Creek. Fish habitat in McCarthy Creek is capable of supporting a viable spawning population of Dolly Varden. Other fish species may be present, but a more intense sampling event occurring periodically throughout a 12-month period would be required to confirm or refute their presence.

The viability of the Dolly Varden population in McCarthy Creek is unknown at this time. At this time, the only anadromous stream nomination ever submitted to the State of Alaska within the entire McCarthy Creek quadrangle based upon the presence of potentially anadromous Dolly Varden, is the nomination for McCarthy Creek based upon the 2003 sampling effort (personal communication, J. Johnson). This suggests that potentially anadromous or large fluvial Dolly Varden are extremely rare within the Chitina River watershed. The NPS believes the potential for recolonization of this stream by other migratory populations of Dolly Varden is low because other

populations are not known to occur in the vicinity of McCarthy Creek. Other streams within the Copper River Basin are known to contain extremely small populations of anadromous salmonids, such as Tanada Creek, where returning chinook salmon are estimated annually using a weir and returning adult populations range from 2 to 16 individuals. If spawning resident or fluvial Dolly Varden are present when ripe anadromous individuals return, individuals exhibiting different life histories can interbreed and the genetic contribution of the anadromous individuals likely enhances the viability of the resident or fluvial population.

If anadromous or fluvial Dolly Varden are truly rare in McCarthy Creek then the viability of the entire Dolly Varden population in McCarthy Creek is less than it would be if anadromous and fluvial individuals were strong components of the population. A tremendous level of work with bull trout (*Salvelinus confluentus*), a species that has only recently become taxonomically distinct from Dolly Varden, has shown that populations with only a resident component remaining are at much higher risk of extinction than populations with migratory (fluvial or adfluvial) components. It is possible that past actions in McCarthy Creek, including mining, construction or maintenance of access alignments, have impacted anadromous or fluvial populations and potentially reduced these populations to low levels. In addition, two large flood events in the past 20 years have undoubtedly resulted in short term impacts to the Dolly Varden population and their habitat.

3.5 Wildlife

The following documents contain additional descriptions of wildlife within Wrangell-St. Elias National Park and Preserve, and are the source of the wildlife information presented in this environmental assessment.

- National Park Service, "Final Environmental Impact Statement, Cumulative Impacts of Mining, Wrangell-St. Elias National Park and Preserve," 1990.
- National Park Service, "Wrangell-St. Elias Subsistence Management Plan," 1998.
- National Park Service, "Final Environmental Impact Statement, Wilderness Recommendation,"1988.
- National Park Service, "General Management Plan/Land Protection Plan, Wrangell-St. Elias National Park and Preserve," 1986.

The park and preserve contain one of the largest protected ecosystems in North America, and support numerous populations of wildlife species. Wildlife management in the preserve is a cooperative effort among the National Park Service and the Alaska Department of Fish and Game. The study area is situated in Game Management Unit 11; notable wildlife species are brown (grizzly) bear, black bear, and moose. Caribou do not typically occur in the study area; the three caribou herds that use portions of the park and preserve are found north of the Wrangell Mountains.

The McCarthy Creek drainage is an area where local rural residents subsistence hunt for wildlife such as moose, brown bear, black bear, goat, Dall sheep, ptarmigan and grouse. Trapping for furbearers also occurs. Portions of the drainage are within Wrangell-St. Elias National Preserve, and sport hunting is permitted within the preserve. Dall sheep are present at higher elevations, and are not typically found in the proposed access corridor.

Figure 3.6 Large woody debris along McCarthy Creek.

Encounters between humans and bears have been common in the McCarthy-Kennicott area for many years. In 2000 and 2001, the National Park Service conducted a bear study to quantify the nature of these encounters and describe the resident bear population (Wilder, NPS, 2003). A human-bear conflict is defined as any instance where human food, garbage, or other attractants bring bears into close proximity with humans; where bears opportunistically receive food rewards from human encounters; where property is damaged; where bears are killed or wounded; or any encounter where bears display aggressive behavior toward humans. A common cause of human-bear conflicts is human food. Food and food odors are bear attractants; unsecured attractants can increase the number of human-bear conflicts. There were 91 human-bear conflicts reported in 2000 and 66 in 2001. In the cases where the human party in the conflict was identified as either a local resident or park visitor, local residents were involved in 80 percent of reported human-bear conflicts (121 of 151 cases).

Based on the 2003 NPS bear study, current knowledge and research regarding human-bear conflicts in the McCarthy-Kennicott area indicate that:

- The number of resident humans in the area, the number of humans visiting an area, the amount of road and trail access, the amount of off-road and off-trail travel, and the occurrence and sanitation of human development are positively correlated with the frequency of human-bear conflicts
- Bears are common in the area
- Natural food sources for bears are abundant
- Soapberries are an important food resource for bears, and may influence the occurrence of human-bear conflicts
- Soapberries are present in the proposed access corridor
- Past human-bear conflicts in the area have involved many bears rather than a few "problem" bears
- High quality food sources and increased human presence increase habituation of bears to humans
- Unsecured attractants are a major cause of human-bear conflicts, and maintain the presence of food-conditioned bears
- Bears habituated to humans and conditioned to human foods are responsible for the majority of recorded human injuries arising from human-bear conflicts
- Affirmative human defensive actions associated with human-bear conflicts would increase direct and indirect injury and mortality for black and brown (grizzly) bears

3.6 Cultural Resources

The McCarthy Creek valley contains 12 known historic sites related to lode mining and associated transportation. These are mostly comprised of mining camps, mines and mine features, road construction camps, isolated cabins, remains of bridge abutments, and tunnels. One site, the Green Butte Mining Camp Historic District (XMC-096), is eligible for listing on the National Register of Historic Places. Currently, in consultation with the Alaska State Historic Preservation Officer (SHPO), eleven other sites are being evaluated for their eligibility for inclusion into the register These sites are XMC-042 the Meadow Camp; XMC-043 the East Track Camp; XMC-044 the Shelter Cabin; XMC-045 the Big Ben Mill Site; XMC-046 the Five Mile Cabin; XMC-049 the East Fork Camp; XMC-050 the Gateway Mill Site; XMC-051 Lower Nikolai Creek Camp; XMC-064 the Hero Mill Site; XMC-102 the Musher Cabin, and XMC-439 the McCarthy Creek Road. Of the eleven, three have been determined eligible by the NPS.

These include the McCarthy Creek Road (XMC-439), and two nearby cabins XMC-044 and XMC-102. The NPS is awaiting concurrence on its findings.

While no prehistoric sites have been identified within the area of potential effect of this project, sites found elsewhere in similar topographic settings within the park include lithic scatters, quarry sites, villages, and hunting and fishing camps.

Additional information about cultural resources within Wrangell-St. Elias National Park and Preserve, and specifically within the McCarthy Creek corridor, can be found in the documents below which are incorporated by reference.

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- Miller and Creech. "Cultural Resource Site Inventory Form, XMC-050," June 26, 1989.

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3.7 Visitor Use and Aesthetics

The McCarthy Creek drainage is adjacent to and at the upper end, part of the Kennecott National Landmark (NHL), the most popular visitor destination in the park. The average visitation to the Kennecott area ranges between 8-12 thousand people per year (Littlejohn, 95, WRST Mining EIS). The creek terminates in the town of McCarthy which, though not within the NHL, is considered, like the NHL, as part of this visitor destination. The drainage lies within the preserve and is not part of federally designated wilderness. For recreational purposes, park management considers this area to be "Frontcountry," meaning that amenities for visitor use, such as constructed and maintained trails would be appropriate. This term does not mean that the area is highly developed. While trails have been maintained on the other side of the ridge, such activity has not occurred in the McCarthy Creek drainage.

Because of its location, the drainage has served as popular alignment for visitors that want a short (2-3 day) backpacking trip that does not need air taxi support. The alignment can be a circular one, and typically users start from the Mill Town in Kennecott, hike up to Bonanza Ridge (site of one of the five Kennecott Mines), cross over the ridge into the McCarthy Creek drainage near the Motherlode Mine (another one of the Kennecott Mines) and then follow the creek back down to

the town of McCarthy. Along the creek, users sometime hike on the gravel bars within the creek bed, and additionally use sections of the historic access alignment unless vegetation, such as alders, make it too difficult to traverse.

Visitors that choose to support their trip with an air taxi typically fly up the McCarthy Creek drainage with a local air taxi from the McCarthy strip to the Green Butte and/or Nikolai Ridge and then hike back down to McCarthy. This area has been used by parties hiking independently, hikers that choose a guided trip with one of the park's commercial operators, and it has been used by a local educational non-profit the Wrangell Mountains Center as part of their outdoor education program with their college classes. Some visitors will hike partway up the drainage and return to McCarthy as a day hike. Recreational use in the winter is certainly much less than in the summer and is limited primarily to local residents in the area that would ski, dog mush, or trap/hunt in the drainage.

Recreational use and aesthetics includes somewhat limited opportunities for solitude, fairly numerous chances to observe historic mining resources, opportunity to experience natural quiet and wildlife, including bears, the chance to traverse challenging terrain and high water stream crossings, and arresting scenery along Bonanza Ridge, Green Butte and Nikolai Ridge. With the blading of the alignment by the applicants in 2002, alignment finding is no longer a recreational use and aesthetics component. Additionally, since the arrival of the applicants, recreational pedestrian use may have declined. Some users may be concerned over inadvertently trespassing on the applicants' property and, therefore, may have decided to avoid the access corridor altogether rather than find themselves trespassing on private property (Court declaration of Mr. Ben Shane, *Hale v. Norton).* Additionally, when the access alignment was bladed, the material, such as alder saplings, was laid down in the alignment in a crosswise direction. Such an arrangement, makes passage by hikers difficult. While hikers have a more difficult time along the alignment, the blading has made it easier for ORVs and snowmachines to access the area. ORVs are used by local rural residents for subsistence purposes.

The previous owner of these properties permitted an NPS concessionaire to use the airstrip at Spokane Placer as an access point for his hunting clients and their supplies. This concessionaire is no longer operating and guided hunting is no longer occurring in this area.

4.0 ENVIRONMENTAL CONSEQUENCES

The National Environmental Policy Act (NEPA) mandates that environmental consequences of a proposed federal action be disclosed to the public. In this case, the proposed federal action is authorization of a temporary access permit to inholdings within Wrangell-Saint Elias National Park and Preserve. This chapter of the EA presents the potential effects of the three alternatives (including the no-action alternative) on the soil and substrate; vegetation; aquatic habitat and fish; wildlife; cultural resources; visitor use and aesthetics, and safety. These effects provide a basis for comparing the advantages and disadvantages of the alternatives. The specific subjects covered in this chapter reflect the impact topics identified in Chapter 1 of this document, the Purpose and Need for Action. (Note: the terms, "effect," "impact," and "environmental consequences," are interchangeable.)

To determine potential impacts, topic specialists relied on best professional judgment, as well as information from the literature, AutoCAD drawings and aerial photography, and field investigations.

One key assumption was made when assessing the impacts of Alternative B (Applicants' Proposal). For this alternative, topic specialists assumed that ground conditions during travel would be as they normally are in October and November; that is, the ground would be frozen to a depth of less than 12 inches and streams would have open water. Were the applicants to travel during frozen conditions, the impacts to park resources and values would be less than those described in the analysis of Alternative B.

The environmental consequences to each impact topic are described in terms of direct, indirect, and cumulative impacts, as well as the duration, context, and intensity of impact (for more information, see *NPS Director's Order 12: Conservation Planning, Environmental Impact Analysis, and Decision-Making*). Impact threshold definitions also were defined and are presented below for general topic categories.

Natural Resource Impacts

Negligible – Impacts would not be detectable, measurable, or observable.

Minor – Impacts would be detectable, but not expected to have an overall effect on the natural community. Impacts generally affect less than one-half acre of the resource or would not be expected to be outside the natural range of variability for that resource.

Moderate – Impacts would be clearly detectable, but could have short-term appreciable effects on the local ecology. Impacts may affect up to one-acre of the resource, but would not threaten the continued existence of that resource.

Major – Long-term or permanent, highly noticeable effects on individual species, community ecology, or natural processes. Impacts may affect over one-acre of resource area or may affect the continued existence of that resource.

Cultural Resource Impacts

Negligible – Impact is at the lowest levels of detection with neither adverse nor beneficial consequences. The determination of effect for 106 would be no adverse effect.

Minor – Adverse: alteration of a feature(s) would not diminish the overall integrity of the resource. The determination of effect for 106 would be no adverse effect. Beneficial: stabilization/preservation of features in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties*. The determination of effect for 106 would be no adverse effect.

Moderate – Adverse: alteration of a feature(s) would diminish the overall integrity of the resource. The determination of effect for 106 would be adverse effect. A memorandum of agreement (MOA) is executed among the NPS and applicable state or tribal historic preservation officer and, if necessary, the Advisory Council on Historic Preservation in accordance with 36 CFR 800.6 (b). Measures identified in the MOA to minimize or mitigate adverse impacts reduce the intensity of impact under NEPA from major to moderate. Beneficial: rehabilitation of a structure in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties.* The determination of effect for 106 would be no adverse effect.

Major – Adverse: alteration of a feature(s0 would diminish the overall integrity of the resource. The determination of effect for 106 would be adverse effect. Measures to minimize or mitigate adverse impacts cannot be agreed upon and the NPS and the applicable state or tribal historic preservation officer and/or Advisory Council are unable to negotiate and execute a memorandum of agreement in accordance with 36 CFR 800.6(b). Beneficial: restoration of a structure in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties* The determination of effect for 106 would be no adverse effect.

Visitor Use and Aesthetics Impacts

Negligible – Impacts would not be detectable, hence visitors would not be aware of any effects.

Minor – Visitors would be aware of effects, but this would be short-term and could be avoided or minimized through planning.

Moderate – Very noticeable long-term effects resulting in some negative visitor experiences, despite implementing minimization efforts.

Major – Very noticeable long-term effects with the loss of use of a resource during a peak time creating a widespread negative visitor experience or may result in a permanent loss of use of a resource.

Safety Impacts

Negligible – Impacts would not be detectable, measurable, or perceptible.

Minor – Effects would be limited to a small number of visitors and could be avoided or minimized through planning.

Moderate – Safety concerns, resulting in increased accident rates, would still exist despite implementing all minimization efforts.

Major – Safety issues that would be long term and permanent.

4.1 Effects To Soil and Substrate

4.1.1 Alternative A – No-Action Alternative

4.1.1.1 Direct and Indirect Impacts

Alternative A would likely lead to the increased use of horse-drawn wagon and snow machines to transport material and supplies along the access corridor. The use of snow machines would not cause impacts to soil and substrate resources. Horse-drawn wagons could cause minor detrimental impact to soils especially on fine textured surface soils under wet conditions. Horse hooves abrade, compact, shear and displace surface soils. This can lead to rutting, water accumulation, muddy trail development, and possible erosion. These impacts would be greatest on the fine textured soils –predominately within the "upland' terrain unit, and where there are recently deposited mineral debris from landslide and mudflows. These impacts would most likely be minor.

4.1.1.2 Cumulative Impacts

Historic activities in the McCarthy Creek watershed have impacted native soils and substrates. These include clearings for development sites and the construction of roads and trails. According to the Mining EIS for Wrangell-St. Elias National and Park and Preserve approximately 72 acres of lands have been disturbed in the greater Kennicott area. Approximately 34 acres of that amount, almost all associated with roads and trails, occurs in the McCarthy Creek watershed. Past activities removed soils from production and led to the loss of soil resources through burial, and wind and water erosion. In most cases the loss of production was temporary and when human occupancy and use was discontinued soil productivity resumed, although at an initially reduced level. Disturbance also changed the original character of native soils by modifying texture, organic matter content and drainage class. Vegetation regrowth often reflected that change and new growth usually contrasted with surrounding undisturbed sites. The modifications also affected site productivity –in some areas increasing productivity due to improved soil drainage. Motorized vehicle travel and alignment clearing and blading along approximately 14 miles of historic and some pristine alignment sections in 2002 further disrupted soil productivity. Impacts were greatest along pristine segments, less so along pre-park alignments. This action set back plant succession and soil development in some areas and exposed small areas to erosion. In total, activities that occurred before the establishment of the park have had a moderate impact on soil and substrate resources in the valley. Any foreseeable future actions would likely be limited to those occurring along historic alignments and on private inholdings. These would likely be well within the footprint or scope of past disturbance, and therefore would be considered as minor impacts.

The addition of impacts from actions under Alternative A would generate only minor additional cumulative impacts to soils or subsurface resources. Therefore, the total cumulative impacts from past, proposed and future impacts to soil and substrate resources in the area is considered moderate.

4.1.1.3 Conclusion

Under this alternative, there would be minor adverse impacts to soil and substrate resources. The level of effects on soils and substrate would not result in an impairment of park resources that fulfill specific purposes identified in the park and preserve enabling legislation or that are key to the natural and cultural integrity of the park and preserve.

4.1.2 Alternative B – Applicants' Proposal

4.1.2.1 Direct and Indirect Impacts

Under this alternative, the impact-causing agents of access would include driving a bulldozer on an existing alignment, possible fuel spills, and blading within the existing alignment.

There are negligible anticipated long-term direct or indirect detrimental impacts from bulldozer operations across floodplains and young terrace terrain units (for a description of physical terrain units see affected environment-soil and substrate). The soils associated with these terrain types are well drained and have a high percentage of armoring gravel in their surface soil layer. That gravel surface is very resilient to impact from surface traffic. While some minor surface disturbance may occur, very little soil displacement in the form of erosion is likely to occur and the disturbance is likely to have little effect on site productivity.

There are minor anticipated direct or indirect detrimental impacts from bulldozer operations across older terraces and side slope terrain units. Soils associated with these terrain types have some areas with fine textured mineral or organic surface layers. These areas occur where mature vegetation has developed on the older terraces and where blading has exposed fine materials on side slopes. An additional area of concern is where fine textured mineral deposits have been deposited from landslides or mudflows. All areas of fine textured or organic surface materials are subject to churning from repeated traffic. This destroys surface vegetation, creates muddy conditions and may lead to erosion on sloped areas. Some of the eroded material may be transported to other locations and cause sedimentation problems. Following disturbance, the sites may require up to 5-10 years to re-vegetate. Due to the limited area of fine textured and organic soils the impacts are expected to be minor.

Minor direct and indirect impacts are possible from bulldozer operations across the upland terrain unit. This terrain type occupies approximately 1.5 miles of length of the alignment (approximately 12%). The soils associated with the upland unit locally have a high percentage of fine textured organic and mineral material that is not resistant to surface disturbance, as well as some soil impact, in the form of entrenchment and rutting, evident from past use. Re-vegetation has stabilized some of the past impacts, but re-disturbance in 2002 has increased the sensitivity of these soils. If subjected to heavy use, especially under wet conditions, these soils can be directly impacted from shearing, compaction and displacement. This can lead to loss of vegetation cover, destruction of soil structure and associated pore space, collection and ponding of water, mud hole development, and transport erosion. Soil productivity is setback at disturbance sites and soil is lost at sites of erosion. Indirect impacts can occur if eroded sediments are carried down slope into adjacent water ways. The risk of impact is related to the amount of vegetation cover still remaining on the alignment surface, frequency of travel, soil texture and organic mater content, soil moisture conditions, and slope. Following disturbance, impacted sites can stabilize through the process of natural re-vegetation. On flat lying sites this can occur within 5 to 10 years with little long-term loss of soil productivity. On sloped sites where erosion occurs, stabilization by natural methods may take many years and some areas may require engineering stabilization. The potential of new impacts to soil and substrate resources from this action on uplands is considered minor because of its history of use.

Fuel spills have the potential for creating major localized impacts to soil and substrate resources. Fuels kill most soil microorganisms and create toxic soil solutions that kill plants and contaminate ground water. Soils recover from spills by the leaching of contaminates from precipitation and natural bioremediation. Toxic effects from spills can last for years depending on soil texture, the

volume and type of spill, and rates of biologic activity. Soils can also be lost from productivity if contaminated soils are excavated and removed during remediation operations. However, the risk of a large enough spill to have a major impact to soil or substrate resources along the access alignment is considered small.

Blading of material off the existing alignment would occur, at two sites (Cutbank and upper tunnel bypass) and where benches have been cut across steep side slopes. In general, blading landslide debris off bench cuts would have little detrimental impact to soil or substrate resources because the volume of material is small and the activity would occur on previously disturbed sites. There is concern that blading at the Cutbank site could accelerate up hill slope failure. Debris slumps across a bench cut are generally nature's attempt to reestablish a slope's natural angle of repose; that is, the angle at which different grades of material are stable. The removal of debris at the Cutbank site could affect that angle by undercutting the toe of the slope. This could further destabilize the slope and thereby trigger addition landslides and affect soil and vegetation resources above the cut. Approximately 300 feet of alignment is a bench cut at that site. A small portion of which requires initial blading but additional blading is likely over the course of the permit period. Assessing the significance of the destabilizing effect of blading is complicated by the fact that the slopes at the Cutbank site were initially destabilized by undercutting from McCarthy Creek. The creek has had a much greater influence on site conditions than the proposed blading. Toe slope debris removal from the blading operation could indirectly contribute to the loss of up to 0.25 acres of up slope soils. In light of the material lost due to previous natural processes at the Cutbank site, any additional soil losses from blading by the applicant are deemed to be minor.

There are four possible re-alignments: one across the creek from the Cutbank section, one at Green Butte Millsite, one at 5 Mile (US Survey 6081) and one for the Big Ben Millsite bypass. The re-alignment across from the Cutbank would be a re-alignment along an existing cleared alignment on the opposite side of the valley. At Green Butte Millsite and 5 Mile (US Survey 6081), the alignment would be re-routed across a nearby existing alignment and over a barren floodplain. At Big Ben Millsite, the bypass alternative would be up the frozen streambed. It is not expected that any of these re-alignments would cause impacts to soils or substrate resources.

4.1.2.2 Cumulative Impacts

As described in section 4.1.1.2., the impacts from past, on-going, and foreseeable future actions within the area have had a moderate impact on soil and substrate resources. The additional contribution of minor impacts from this alternative results in a moderate rating for overall cumulative impacts to soil and substrate resources within the area.

4.1.2.3 Conclusion

Under this alternative, there would likely be minor adverse impacts to soil and substrate resources from bulldozer operations and possible fuel spills. The level of effects on soils and substrate would not result in an impairment of park resources that fulfill specific purposes identified in the park and preserve enabling legislation or that are key to the natural and cultural integrity of the park and preserve.

4.1.3 Alternative C – Access on Frozen Ground and Mostly Frozen Water (*NPS Preferred*)

4.1.3.1 Direct and Indirect Impacts

The protection of soil and substrate resources is easier to accomplish under frozen soil and snow cover conditions. Under this alternative, the impact-causing agents of access on soil and substrate resources would be possible fuel spills and blading within the existing alignment. No detrimental impacts to soils or substrate would be anticipated from dozer operations over frozen ground with adequate snow cover or operations crossing frozen or open stream crossings.

Detrimental impacts to soils and substrate from fuel spills would be greatly reduced during periods of frozen ground conditions. The frozen surface seals soil pores from fuel infiltration and snow acts as a natural absorbent. If fuel is contained and removed, little residual impact is likely. In the case of small spills (less than a gallon), spring thaw of snow cover would likely dilute spills below toxic effect. Large spills contained within a depression until after the ground has thawed would have the potential for creating major impacts to soil and substrate resources. Soil productivity would be lost if these sites required excavation and removal during remediation operations. If not removed, fuels would likely kill most soil microorganisms and create toxic soil solutions that would kill plants and contaminate ground water. Soils recover from spills from the leaching of contaminates by precipitation and natural bioremediation, but the toxic effects can last for years depending upon soil texture, the volume and type of spill, and rates of biologic activity. The risk of a large enough spill to have major impacts to soil or substrate resources along the access alignment is considered small especially given permit terms and conditions.

Blading of slump debris off of the alignment is anticipated at the upper tunnel bypass site for this alternative. (Note that the Cutbank alignment would not be used under this alternative; instead, the alternate alignment across from the Cutbank would be used.) The side casting of debris from this upper tunnel bypass site would have a negligible impact due to snow cushioning on the slope below the bench. Up slope impacts remain similar to Alternative B. Another threat is the possibility that the dozer may skid off the alignment at this site and cause a moderate to major impact to down slope soil resources. Due to steep slopes and shallow soils the down slope area is sensitive to impact and disruption could lead to destabilization and erosion problems. In spite of this risk, the impacts from these activities would most likely be minor because of the small area involved.

There are three possible re-alignments: one at Green Butte Millsite, one at 5 Mile (US Survey 6081) and one for the Big Ben Millsite bypass. At Green Butte Millsite and 5 Mile (US Survey 6081), the alignment would be re-routed across a nearby existing alignment and over a barren floodplain. At Big Ben Millsite, the bypass alternative would be up the frozen streambed. It is not expected that any of these re-alignments would cause impacts to soils or substrate resources.

4.1.3.2 Cumulative Impacts

As described in section 4.1.1.2., the impacts from past, on-going, and foreseeable future actions within the area have had a moderate impact on soil and substrate resources. The additional contribution of negligible to minor impacts from this alternative results in a moderate rating for overall cumulative impacts to soil and substrate resources within the area.

4.1.3.3 Conclusion

Under this alternative, with appropriate management controls, there would be only negligible to minor adverse impacts to soil and substrate resources. The level of effects on soils and substrate would not result in an impairment of park resources that fulfill specific purposes identified in the park and preserve enabling legislation or that are key to the natural and cultural integrity of the park and preserve.

4.2 Effects To Vegetation

4.2.1 Alternative A – No-Action Alternative

4.2.1.1 Direct and Indirect Impacts

Under this alternative, the applicants may transport materials and supplies into their inholding using other methods which do not require permitting, such as horses, snowmachines or airplanes. If fuel is carried along the existing alignment using surface transport, there would be a potential for fuel spills, and the vegetation loss resulting from digging up contaminated soils. If horse travel increases substantially, there would be impacts to vegetation along the alignment, especially in areas of moist ground, seeps and drainages and the landslide deposition zones on terraces. These areas would become churned and muddy, and would likely not revegetate in the track(s) used by horses. Horses represent a hazard for exotic plants, as seeds in their feed become distributed along the alignment in their feces.

4.2.1.2 Cumulative Impacts

Historic mining activities in the McCarthy Creek valley cleared a number of access alignments and development sites. Most of these areas had stabilized and revegetated to near-original communities. In 2002, most of the alignment from Spokane Placer and the Mother Lode claims to the town of McCarthy was opened up for mechanized travel by unauthorized brushing, blading and creation of several sections of new alignment on pristine lands. Several stretches have multiple alignments. Approximately 16.2 acres of vegetation was cut back and tracked or bladed and destroyed on a combination of 25 year old surfaces and pristine forest. Additional impacts to the vegetation of the valley include a bark beetle infestation in the 1990s which has killed many of the mature white spruce trees on the terraces, side slopes and uplands. Future actions may include continued vehicular and horse travel along the alignment by the applicants and others, including subsistence users.. Such access, especially if much occurs during thaw season, would prolong the disturbance to soils and vegetation in the alignment, and set back further regrowth and vegetation succession by 5 to 10 years, depending on how long such disturbance continues. Further changes could occur in the event that the applicant applies for and receives a permanent Right-of-Way to the inholdings. The details of such a ROW are unknown at this time and cannot by analyzed within the scope of this EA. Cumulatively, these actions would produce moderate impacts to vegetation resources. The additional contribution of minor impacts from this alternative results in a moderate rating for overall cumulative impacts to vegetation resources within the area.

4.2.1.2 Conclusion

In summary, implementing Alternative A would have minor additional adverse impacts to vegetation resources along the access alignment from McCarthy to the applicants' inholdings in upper McCarthy Creek. The level of effects on vegetation resources with this alternative would

not result in an impairment of park resources that fulfill specific purposes identified in the park and preserve enabling legislation or that are key to the natural and cultural integrity of the park and preserve.

4.2.2 Alternative B – Applicants' Proposal

4.2.2.1 Direct and Indirect Impacts

Under this proposal, the applicants would travel the existing alignment up to 18 times (9 round trips), with an estimated total 300 stream crossings. If the bulldozer crosses the stream using the recently bladed alignment, there should be no further damage to or loss of riparian vegetation on the floodplains or terrace approaches.

Bulldozer and trailer travel along the existing alignment during thawed conditions would continue to cut and churn the existing minimal root and ground cover mat. Sections of fine grained and moister soils, or areas with barren ground would be impacted most severely. These areas are most likely to be on the older terraces, side slopes and upland sections where succession has proceeded to mature white spruce forests, and the areas of landslide deposition discussed in the affected environment. The long term consequences of grinding up the root mat with the grousers would be setting back vegetation regrowth and succession in the existing alignment by approximately 10-20 years. Grinding up the root mat would remove the cottonwood, willow and alder roots and shoots which are currently the source of many of the regrowing shoots and thus form much of the overall vegetation cover along the alignment. Repeated trips during un-frozen conditions would also destroy the remnants of moss and forb ground cover in the tracks, and would likely further damage the middle strip of low vegetation. Recent floodplains with minimal riparian vegetation are generally well drained and gravelly, and would sustain minimal damage from bulldozer travel.

Although not ecologically functioning wetlands, seeps and narrow rivulets along the alignment are a special problem for repeated trips during thaw seasons. Repeated bulldozer/trailer travel, especially during spring break up or rainy seasons would likely further churn and mix fine grained soils and enlarge the wet zones. Particular hazards are the landslide deposition areas on terraces, and seeps and springs along side slopes and the uplands between Green Butte Millsite and East Fork. These wet areas would probably be enlarged and deepened, and the banks of the drainages would be broken down. In the worst situation, bog holes would be created, and the bulldozer would be routed onto more stable ground around the holes.

Vegetation consequences from small fuel spills would be minimal, unless restoration of the spill site involves digging and removing the contaminated soils. Such actions would destroy the vegetative cover of the spill area and some surrounding region.

Impacts of blading on the existing alignment would be pretty much site-specific. Most of the blading is expected be on cut and fill sections of side slopes. The side slope on the bypass of the upper tunnel probably would have minimum impacts from blading since the slope above the alignment is fairly stable. However, continued blading along the steep gravel Cutbank below Marvelous Mill would continue to destabilize the bank. Vegetation mats and trees are already sloughing off the upper reach and sliding down the gravel slope. As the mats and trees are undercut and slide, the roots are damaged. The trees would probably die, and the mats of dwarf shrubs, willow and juniper (*Juniperus communis*) may die. The vegetation community (moss and juniper, stunted birch and spruce) which has established on this cut bank is somewhat unique in the McCarthy Creek valley, similar to the Arctic Steppe community found on steep, dry boreal

hillsides. The duration of instability is difficult to estimate because it depends on the combination of continued blading of the alignment and McCarthy Creek channel location and flows.

Proposed rerouting at the private parcel US Survey 6081 (locally called the 5-Mile Cabin) (Map 7, lower section) is on the active floodplain and should not impact vegetation except where the bulldozer blades a ramp onto the terrace at the north end of the bypass. The Green Butte Millsite parcel can be bypassed over an existing bladed alignment on the active and lightly vegetated floodplain to the west of the parcel. Such travel would not have additional impacts to vegetation. Non-native Plants: Alternative B may increase the infestation of non-native exotic plants along the corridor. The greatest danger comes from seeds and plant parts which may become stuck and carried on the treads or undercarriage of the bulldozer, either from McCarthy or the area near the Marvelous Millsite. Ongoing travel by horses also represents a hazard for exotic plants, as seeds in their feed become distributed along the alignment in their feces.

4.2.2.2 Cumulative Impacts

As described in section 4.2.1.2., the impacts from past, on-going, and foreseeable future actions within the area have had a moderate impact on vegetation. However, under Alternative B, future actions may include continued thaw season vehicular and horse travel along the alignment by the applicants and others. Such access, especially if much occurs during thaw season, would prolong the disturbance to soils and vegetation in the alignment, and set back further regrowth and vegetation succession by 10 to 25 years, depending on the duration and severity of the disturbance. These cumulative impacts would last longer than Alternative A or Alternative C due to greater disturbance to the existing root mat along the alignment under Alternative B. Cumulatively, these actions would produce moderate impacts to vegetation resources on up to 16 acres. The additional contribution of minor to moderate impacts from Alternative B would result in a moderate rating for overall cumulative impacts vegetation within the area.

4.2.2.3 Conclusion

In summary, the actions of Alternative B would have minor to moderate adverse impacts to vegetation resources in the valley if the existing alignment is used. The most damaging impacts would be the churning of soils and destruction of the existing roots and ground cover mat, which would set back vegetation succession by 10 to 20 years. The level of effects on vegetation resources with this alternative would not result in an impairment of park resources that fulfill specific purposes identified in the park and preserve enabling legislation or that are key to the natural and cultural integrity of the park and preserve.

4.2.3 Alternative C – Access on Frozen Ground and Mostly Frozen Water (*NPS Preferred*)

4.2.3.1 Direct and Indirect Impacts

Under this proposal, the applicants would travel the existing alignment up to 18 times (9 round trips), with an estimated total of 300 stream crossings. If the bulldozer crosses the stream using NPS specified crossings, there should be no further damage to or loss of riparian vegetation on the floodplains or terrace approaches. Snow and ice cover should protect active floodplain vegetation.

Bulldozer travel along the existing alignment during seasons with frozen ground and compacted snow deep enough to keep the grousers from nicking the soil should have minimal impact to the vegetation roots, ground cover mat and center ridge of vegetation. The bypass at 5-Mile (US

Survey 6081) is on active floodplain so there would be minimal impact to vegetation in these areas. The alternative alignments at Green Butte Millsite and onto the East Side Track around the Cutbank are on existing alignments, and impacts would be minimal, similar to impacts on the remainder of the corridor. If the streambed and floodplain are used as a bypass at Big Ben Millsite (Big Ben Creek Corridor on Map 7), travel over ice up the creek would have minimal impacts since this area is largely free of vegetation.

If fuel is spilled into ice or snow, it would be immediately dug out and removed from the area. Snow removal would not impact vegetation. If the fuel is not cleaned up until thaw season, then vegetation would be destroyed in the area where contaminated soils are dug up.

Blading on the existing alignment would be site specific. Although blading of sloughed gravel and soils should be minimal during winter, blading would probably be necessary to level out areas of glaciating ice from ground water; especially in areas of seeps on cut and fill side slopes. One particular trouble spot would likely be the bypass for the upper tunnel, where in summer, ground water surfaces onto the alignment and flows downhill along the tread marks. The south end of the bypass may develop a sloping ice deposit which would need to be leveled to avoid the bulldozer sliding off the alignment and into the forest on the downhill side. If such an accident occurs, trees and shrubs in the area of the bulldozer's descent and eventual alignment back to the alignment would be scraped or removed.

Non-native Plants: The actions outlined in Alternative C would have minimal impacts on the infestation of exotic plants along the corridor. By traveling over ice and snow, the bulldozer grousers and undercarriage would be less likely to pick up non-native seeds and plant parts since they wouldn't come in contact with soil contaminated by non-native propagules. Ongoing travel by horses represents a hazard for exotic plants, as seeds in their feed become distributed along the alignment in their feces.

4.2.3.2 Cumulative Impacts

As described in section 4.2.1.2., the impacts from past, on-going, and foreseeable future actions within the area have had a moderate impact on vegetation. However, under Alternative C, future actions may include continued vehicular and horse travel along the alignment by the applicants and others. Such access, especially if much occurs during thaw season, would prolong the disturbance to soils and vegetation in the alignment, and set back further regrowth and vegetation succession by 5 to 10 years, depending on the duration and severity of the disturbance. Cumulatively, these actions would produce moderate impacts to vegetation resources on up to 16 acres. The additional contribution of minor impacts from Alternative C would result in a moderate rating for overall cumulative impacts vegetation within the area.

4.2.3.3 Conclusion

In summary, the actions of Alternative C would have minor additional adverse impacts to vegetation resources. The most damaging impacts would the potential impacts associated with accidents such as fuel spills or the bulldozer sliding off the alignment. The level of effects on vegetation resources with this alternative would not result in an impairment of park resources that fulfill specific purposes identified in the park and preserve enabling legislation or that are key to the natural and cultural integrity of the park and preserve.

4.3 Effects To Aquatic Habitat and Fish

4.3.1 Alternative A – No-Action Alternative

4.3.1.1 Direct and Indirect Impacts

Fish habitat would continue to recover from the effects of past actions at the current rate. The delivery of large woody debris to streams would return to natural levels and the function of large wood in stream channels would not be altered by the use of the access corridor by tracked vehicles. Fish population viability would likely increase as populations continue to recover from the effects of past actions. The use of horses or snow machines may increase slightly relative to either of the action alternatives. The effect to fish or fish habitat of either of the slight increases in these activities would be negligible.

4.3.1.2 Cumulative Impacts

Past actions that have affected fish and fish habitat within the analysis area include alignment construction and maintenance for the purposes of access to mining sites and more recently the fall 2002 unauthorized blading of this alignment for residential use by inholders. Delivery of large woody debris and substrate has likely been interrupted in the past by the access alignment although prior to the fall 2002 blading of the access alignment these delivery alignments had likely recovered to a functioning level. In addition, two approximately 100-year flood events have occurred within the watershed during the last 20 years (Jones and Glass, 1993). While these events are due to natural causes, the effects have likely had short term but potentially severe impacts to fish habitat and fish populations, including reducing the viability of the Dolly Varden population in McCarthy Creek. Left undisturbed, fish habitat and populations are likely to recover from these events. Park management has tended towards increasing protection for fish and fish habitat (see section 1.3.3) by eliminating nearly all fish stocking and limiting the use of all-terrain vehicles for purposes other than subsistence.

There are historic accounts of sport fishing in Nikolai Creek prior to the establishment of the Park (National Park Service, 2001). Incidental harvest of migratory Dolly Varden occurs in subsistence fisheries in the Copper River. Additional discussions of subsistence and sport fisheries as well as other actions occurring within the Copper River Basin are presented in Christensen and others (2000).

Subsistence use and non-motorized use in the McCarthy Creek watershed has occurred in the past and is likely to continue in the future. ATVs and non-motorized uses may have a small effect on fish habitat including stream banks. Most subsistence use occurs either prior to Dolly Varden spawning or only during the early portion of the spawning period because moose hunting season ends September 20. It is reasonably foreseeable that the applicant will pursue a permanent right of way in the near future.

Further changes could occur in the event that the applicant applies for and receives a permanent ROW to the inholdings. The details of such a ROW is unknown at this time and cannot be analyzed under this effort.

The above past, on-going, and reasonably foreseeable future actions have caused moderate adverse impacts to fish habitat and fish populations; however, both have been and are expected to continue recovering in the future. The additional contribution of negligible impacts from this

alternative would not change this; therefore, the overall cumulative impacts to aquatic habitat and fish would continue to be moderately adverse but recovering.

4.3.1.3 Conclusion

Under this alternative, the slight increase in snowmachine or horse use would have negligible effects to fish habitat and fish population viability. Fish populations would continue to recover from the effects of past actions. The level of effects to fish or fish habitat under this alternative would not result in an impairment of park resources that fulfill specific purposes identified in the park and preserve enabling legislation or that are key to the natural and cultural integrity of the park and preserve.

4.3.2 Alternative B – Applicants' Proposal

4.3.2.1 Direct and Indirect Impacts

Under this alternative, the impact-causing agents of access would include a bulldozer crossing a stream(s); driving a bulldozer on an existing alignment; possible fuel spills; blading within an existing alignment; and driving a bulldozer to create a bypass around private property.

Approximately 300 unregulated bulldozer crossings of the stream channel during periods of unfrozen surface water and unfrozen ground would disturb stream substrate and temporarily alter or eliminate interstitial (space between substrate particles) habitat at the crossing sites for both fish and macroinvertebrates. Fine sediments (<2 mm diameter) in the channel at the crossing site would be mobilized and would travel downstream, depositing on stream channel substrate or within the interstitial area of stream channel substrates. Should stream crossings occur while fish eggs are incubating in the channel (September through April), the deposition of fine sediment in salmonid redds is expected to result in reduced egg to fry survival. The quantity and specific location of fish spawning habitat in McCarthy Creek has not been determined even though Dolly Varden are known to spawn in McCarthy Creek. However, Dolly Varden typically spawn in low gradient riffles or pool tailouts where water velocities are lower. These areas are also typically wider, shallower and lower gradient portions of stream channels that provide more optimal conditions for crossing streams.

Large fluvial or anadromous (migratory individuals spending a portion of their life history in large rivers or the ocean and returning to their natal streams to spawn) Dolly Varden are believed to be rare in McCarthy Creek. As discussed in the affected environment, this population is the only location where a potentially anadromous Dolly Varden individual was found in the Interior portion of the Park/Preserve during a 3 year inventory of freshwater fish populations and it is the only location for which an anadromous stream nomination based upon potentially anadromous Dolly Varden has been submitted to the Alaska Department of Fish and Game within the area displayed in the McCarthy quadrangle. Therefore, regardless of whether the migratory component of this population is anadromous or fluvial, the NPS considers this to be a unique Dolly Varden population within the Park/Preserve because of the presence of a migratory component within the population. The genetic contribution of these fish is extremely important to the viability of the entire Dolly Varden population within McCarthy Creek (Haas and McPhail, 2001; Mobrand and others, 1997; Nielsen, 1998). It is reasonable to assume that if only a small population of large fluvial or anadromous Dolly Varden exists within McCarthy Creek that these fish spawn within only a few small areas. Therefore, should a bulldozer crossing the stream channel impact even one of these spawning areas, the effects could include a substantial loss of the genetics that result in a migratory life history component within the population. While the

exact sediment transport distance will vary substantially based upon particle size, stream flow, channel gradient, and additive effects from the timing and frequency of other crossings of McCarthy Creek, 300 open water stream crossings occurring potentially within a two month or shorter period, during or following the spawning period for Dolly Varden (September through November), has at least a moderate potential to have a major impact on the viability of the Dolly Varden population in McCarthy Creek.

Travel over the existing alignment by bulldozer has the potential to affect fish habitat by altering the frequency and placement of large woody debris including debris jams present on the floodplain or in areas contributing large woody debris to the stream channel. The potential effects of reducing large woody debris levels in stream channels are reduced cover, habitat complexity, off-channel habitat, pool depth, and nutrients for macroinvertebrates. Altering large woody debris, particularly by cutting the downed tree and separating the bole from the rootwad or pushing the downed wood in a manner that frees it from the substrate, substantially reduces the function of the large wood material and results in the woody debris being transported through the system more rapidly. The effects of this alternative on large woody debris levels would likely to be low and large woody debris levels would recover to a more natural level over time. Terrain types of barren floodplain, vegetated floodplain, valley sideslopes, and terraces can all potentially contribute large woody debris to stream channels within the McCarthy Creek watershed. In addition, large woody debris is transported to fishbearing stream channels by non-fishbearing stream channels. The combined acreage of terrain types potentially affected by this alternative would be 21.4 acres (Appendix D). This is only a very small portion of the total area of terrain types that are contributing large woody debris throughout the entire McCarthy Creek watershed.

Fuel spill, particularly of diesel fuel or gasoline directly into flowing waters, has a tremendous impact on aquatic populations by killing fish of all age classes, eggs, and macroinvertebrates. Diesel fuel and gasoline are highly toxic to aquatic life even in low concentrations (Bury, 1972). Gasoline has a toxic effect to rainbow trout at 100 mg/liter. Diesel fuel is acutely toxic to rainbow trout within the range of 350 to 1000 mg/liter. A 55 gallon drum of fuel is greater than 7 cubic feet in size. Flows in McCarthy Creek, during August through October 1913, reported by Jones and Glass (1993), ranged from 37 to 451 cubic feet per second. As little as one 55 gallon drum, ruptured and spilt directly into the channel at these low flows, could result in the mortality of fish or eggs. This alternative provides no provision for safely transporting fuel in approved containers, with fuel containment devices, nor does it propose any limit to the amount of fuel that could be transported. The potential risk of fuel spill under this alternative is unknown but may be potentially high. The greatest risk is fuel that is spilt during a stream crossing. While fuel that is spilt on the access alignment may be contained prior to reaching the stream, a fuel spill occurring while the applicants are crossing the stream is unlikely to be contained and it may not be possible for the applicants to recover the fuel containers. A fuel spill would have the potential to have a major impact on aquatic populations.

Blading the existing alignment would include sidecasting material directly into the stream channel along the area referred to as Cutbank. Sidecasting material into areas identified as riparian conservation areas, often including areas within 300 feet of fishbearing streams, is generally a prohibited practice on Federal lands where an Aquatic Conservation Strategy applies (PACFISH, 1994; INFISH, 1995). While WRST has not adopted an Aquatic Conservation Strategy, sidecasting material directly into streams, particularly outside of the normal timing for mass failures, is likely to result in increased sedimentation and alteration of the natural sediment regime including the interruption of delivery alignments for substrate and large woody debris. Sediment loads that exceed natural background levels can fill pools, silt spawning gravels, decrease channel stability, modify channel morphology, and reduce survival of emerging fry

(Burton and others, 1993; Everest and others 1987; Macdonald and others 1991; Meehan 1991; Rhodes and others 1994; *in* Lee and others, 1997). This alternative would allow for sidecasting directly into stream channels while fish are spawning or while eggs are incubating in the stream channel. Sidecasting into stream channels is commonly accepted among fisheries professionals to result in potentially adverse impacts to fish habitat.

There are four possible re-alignments: one across the creek from the Cutbank section, one at Green Butte Millsite, one at 5 Mile (US Survey 6081) and one for the Big Ben Millsite bypass. The re-alignment across from the Cutbank would be a re-alignment along an existing cleared alignment on the opposite side of the valley. At Green Butte Millsite and 5 Mile (US Survey 6081), the alignment would be re-routed across a nearby existing alignment and over a barren floodplain. At Big Ben Millsite, the bypass alternative would be up the frozen streambed. It is not expected that any of these re-alignments would cause impacts to aquatic habitat or fish.

4.3.2.2 Cumulative Impacts

Past, present and reasonably foreseeable future actions are described under the Alternative A (No-Action Alternative). Past actions have resulted in reduced viability of the Dolly Varden population in McCarthy Creek.

The additional effects of Alternative B, including effects of all stream crossings by a bulldozer being performed during open water periods, an unknown but potentially high potential for fuel spill into the stream, and the potentially major effects of blading the existing alignment and sidecasting directly into the stream channel, have the potential to further reduce the viability of the Dolly Varden population.

The combined effects of past actions and the potential effects of Alternative B have the potential to greatly reduce the viability of the Dolly Varden population and potentially eliminate the migratory component of the population. This loss of viability would be a major impact to fish resources within the McCarthy Creek watershed.

4.3.2.3 Conclusion

Alternative B demonstrates the potential for a high risk of a major impact to the Dolly Varden population in McCarthy Creek. The Dolly Varden in McCarthy Creek are likely an individual fish stock that has specifically evolved to conditions in McCarthy Creek. Our existing knowledge of migratory Dolly Varden populations within the Park is incomplete, but based upon the available information this population appears to be unique within the Park. The enabling legislation for Wrangell-St. Elias National Park/Preserve directs the NPS to manage the Park to …protect habitat for; and populations of; fish and wildlife. Alternative B may result in a loss of viability to a unique Dolly Varden population which would be a permanent impact to the natural integrity of the Park. Therefore, if Alternative B is selected, the purpose and values for which the Park/Preserve was established could be impaired.

4.3.3 Alternative C – Access On Frozen Ground and Mostly Frozen Water (NPS Preferred)

4.3.3.1 Direct and Indirect Impacts

Under this alternative, the impact-causing agents of access would include a bulldozer crossing a stream(s); driving a bulldozer on an existing alignment; possible fuel spills; blading within an existing alignment; and driving a bulldozer to create a bypass around private property. Crossing

when the water is generally frozen would greatly reduce the impacts to fish, fish eggs/embryos and macroinvertebrates described in Alternative B because driving over ice would prevent the mobilization of fine sediments in the stream channel. In addition, crossing only where a Fisheries Biologist has determined that redds are not likely present would substantially reduce the potential for direct and indirect impacts to the Dolly Varden population because fine sediments that are mobilized during these crossings would be unlikely to reach Dolly Varden redds. The potential for fine sediments to be mobilized and deposited in redds would be extremely low under this alternative.

Travel over the existing access alignment by bulldozer has the potential to negatively alter fish habitat by altering the frequency and placement of large woody debris including debris jams present on the floodplain or in areas contributing large woody debris to the stream channel. The potential effects of reducing large woody debris levels in stream channels are reduced cover, habitat complexity, off-channel habitat, pool depth, and nutrients for macroinvertebrates. Altering large woody debris, particularly by cutting the downed tree and separating the bole from the rootwad or pushing the downed wood in a manner that frees it from the substrate, substantially reduces the function of the large woody material and results in the woody debris being transported through the system more rapidly.

Alteration of large, woody debris would be negligible under Alternative C. Permit stipulations would require that this large, woody debris be circumvented by the bulldozer. The large, woody debris would remain unimpacted and contribute to the natural function of the stream.

Alternative C minimizes the potential risk of a fuel spill and its negative impacts to the aquatic ecosystem. The permit stipulations for Alternative B include appropriate measures to prevent fuel spills and to facilitate rapid containment of spilt fuel. The risk of spilt fuel entering the stream channel in quantities large enough to result in a major impact to Dolly Varden populations is low for this alternative.

Sidecasting is not required under this alternative as the Cutbank alignment would not be used (instead, the alternate alignment across from the Cutbank area would be used). Therefore none of the impacts related to sidecasting under Alternative B would occur. The alignment would follow the opposite side of McCarthy Creek where sidecasting would not be required.

There are three possible re-alignments: one at Green Butte Millsite, one at 5 Mile (US Survey 6081) and one for the Big Ben Millsite bypass. At Green Butte Millsite and 5 Mile (US Survey 6081), the alignment would be re-routed across a nearby existing alignment and over a barren floodplain. At Big Ben Millsite, the bypass alternative would be up the frozen streambed. It is not expected that any of these re-alignments would cause impacts to aquatic habitat or fish.

4.3.3.2 Cumulative Impacts

The above past, on-going, and reasonably foreseeable future actions have caused moderate adverse impacts to fish habitat and fish populations; however, both have been and are expected to continue recovering in the future. The additional contribution of minor impacts from this alternative would not change this; therefore, the overall cumulative impacts to aquatic habitat and fish would continue to be moderately adverse but recovering.

4.3.3.3 Conclusion

The effects of this alternative to fish and fish habitat would be minor and would not impair park resources or values.

4.4 Effects To Wildlife

4.4.1 Alternative A – No-Action Alternative

4.4.1.1 Direct and Indirect Impacts

With Alternative A (No-Action Alternative), temporary access could occur at any time of the year. Anticipated impact-causing agents of access would include snowmachine use on adequate snow cover, non-motorized surface transportation (e.g. horses) on an existing cleared alignment, and airplane use on an existing landing strip. Consequently, new physical disturbance of vegetation would be negligible, as would new long-term wildlife habitat loss. Minor short-term habitat loss would continue to occur when wildlife are displaced from or avoid the access corridor during temporary access activities; species that would most likely be displaced are moose (year-round) and bears (when active between den emergence in the spring and winter dormancy in the fall). The indirect impacts of short-term habitat losses are decreased availability of food and prey species; temporary changes in wildlife distribution; increased competition for food; inefficient use of habitat; and altered movement and activity patterns. It is likely that these indirect effects would be brief and intermittent.

Another impact-causing agent of this alternative with indirect effects on black and brown (grizzly) bear populations would arise from the transport of human foodstuffs and animal feed by the applicant. These items are bear attractants that may be in an unsecured condition during surface transit. Unsecured bear attractants are a cause of human-bear conflicts and maintain the presence of food-conditioned bears. Given other extenuating circumstances, such as snowmachine or trailer breakdown, food container damage or spillage, camping, and food preparation enroute, or any other event which increases the availability of unsecured bear attractants to bears habituated to humans, there would be some risk of human-bear conflicts. The risk of human-bear conflicts would be minor to moderate with Alternative A because temporary access would not be limited to a specific number of trips, and because temporary access can overlap with the entire period between bears' den emergence and winter dormancy. Affirmative defensive human response to human-bear conflicts to protect human life and property would increase bear mortality. Conversely, when temporary access and transport of bear attractants occurs during the bears' winter dormancy period, there would be no risk of human-bear conflicts and bear mortality. The effects of this alternative on other wildlife populations would be negligible.

4.4.1.2 Cumulative Impacts

Impact-causing agents of cumulative effects on wildlife are past mining activity; past, present, and future subsistence and sport hunting; past, present, and future development; past, present, future inholder access. In 2002, most of the alignment from the Spokane Placer and Mother Lode claims to the town of McCarthy was opened to mechanized travel by unauthorized brushing, blading, and the creation of several sections of new alignment on pristine land; these actions caused minor long-term wildlife habitat loss. Future actions could include use of the new alignment by off-road vehicles for subsistence hunting, as well as some unauthorized use of off-road vehicles for recreation or other purposes. The access activity possible with this alternative

would result in negligible long-term habitat loss, minor short-term habitat loss, displacement of wildlife, increased human-bear conflicts, and increased bear mortality. Impact-causing agents of cumulative effects on bear populations also include the sanitation of human development, increased human-bear conflicts, and affirmative human response to protect human life and property leading to increased bear mortality. Further changes could occur in the event that the applicant applies for and receives a permanent right-of-way (ROW) to the inholdings. The details of such a ROW are unknown at this time and cannot be analyzed within the scope of this environmental assessment. Cumulatively, these past, present, and reasonably foreseeable future actions would have moderate impacts to wildlife habitat and populations. The additional contribution of negligible and minor impacts from this alternative results in a moderate rating for overall cumulative impacts to wildlife habitat and populations.

4.4.1.3 Conclusion

Alternative A (No-Action Alternative) would result in negligible long-term and minor short-term losses of wildlife habitat, and temporary displacement of wildlife species. The risk of human-bear conflicts and bear mortality would be minor to moderate between the period of den emergence and winter dormancy; during winter dormancy there would be no risk. Effects on other wildlife populations would be negligible. There would be moderate cumulative effects on wildlife populations and habitat. The level of effects on wildlife with this alternative would not result in an impairment of park resources that fulfill specific purposes identified in the park and preserve enabling legislation or that are key to the natural and cultural integrity of the park and preserve.

4.4.2 Alternative B – Applicants' Proposal

4.4.2.1 Direct and Indirect Impacts

The impact-causing agents of access would include a bulldozer crossing a stream; driving a bulldozer on an existing alignment; potential fuel spills; and blading within an existing alignment. Consequently, new physical disturbance of vegetation would be negligible, as would new long-term wildlife habitat loss. Minor short-term habitat loss would continue to occur when wildlife are displaced from or avoid the access corridor during temporary access activities; species that would most likely be displaced are moose. The indirect impacts of short-term habitat losses are decreased availability of food and prey species; temporary changes in wildlife distribution; increased competition for food; inefficient use of habitat; and altered movement and activity patterns. It is likely that these indirect effects would be brief and intermittent.

Another impact-causing agent of this alternative with indirect effects on black and brown (grizzly) bear populations would arise from the transport of human foodstuffs and animal feed by the applicant. These items are bear attractants that may be in an unsecured condition during surface transit. Unsecured bear attractants are a cause of human-bear conflicts and maintain the presence of food-conditioned bears. Given other extenuating circumstances, such as bulldozer or trailer breakdown, food container damage or spillage, camping, and food preparation enroute, or any other event which increases the availability of unsecured bear attractants to bears habituated to humans, there would be some risk of human-bear conflicts. The risk of human-bear conflicts would be minor with Alternative B because temporary access would be limited to a specific number of trips, and because temporary access would overlap with the period between bears' den emergence and winter dormancy for a limited period, primarily during October. Affirmative defensive human response to human-bear conflicts to protect human life and property would increase bear mortality. Conversely, when temporary access and transport of bear

attractants occurs during the bears' winter dormancy period, there would be no risk of human-bear conflicts and bear mortality. The effects of this alternative on other wildlife populations would be negligible.

4.4.2.2 Cumulative Impacts

As described in section 4.4.1.2 the impacts from past, present, and reasonably foreseeable future actions within the area have had moderate impacts to wildlife habitat and populations. The additional contribution of negligible and minor impacts from this alternative results in a moderate rating for overall cumulative impacts to wildlife habitat and populations.

4.4.2.3 Conclusion

Alternative B would result in negligible long-term and minor short-term losses of wildlife habitat, and temporary displacement of wildlife species. The risk of human-bear conflicts and bear mortality would be minor in October prior to winter dormancy; during winter dormancy there would be no risk. Effects on other wildlife populations would be negligible. There would be moderate cumulative effects on wildlife populations and habitat. The level of effects on wildlife with this alternative would not result in an impairment of park resources that fulfill specific purposes identified in the park and preserve enabling legislation or that are key to the natural and cultural integrity of the park and preserve.

4.4.3 Alternative C – Access On Frozen Ground and Mostly Frozen Water (*NPS Preferred*)

4.4.3.1 Direct and Indirect Impacts

For the purposes of analysis, it is also assumed that bears will be in winter dormancy. The impact-causing agents of access would include a bulldozer crossing a stream; driving a bulldozer on an existing alignment; potential fuel spills; and blading within an existing alignment. Consequently, new physical disturbance of vegetation would be negligible, as would new long-term wildlife habitat loss. Minor short-term habitat loss would continue to occur when wildlife are displaced from or avoid the access corridor during temporary access activities; species that would most likely be displaced are moose. The indirect impacts of short-term habitat losses are decreased availability of food and prey species; temporary changes in wildlife distribution; increased competition for food; inefficient use of habitat; and altered movement and activity patterns. It is likely that these indirect effects would be brief and intermittent.

The risk of human-bear conflicts and bear mortality would not exist because temporary access would occur during the period that bears are in winter dormancy. The effects of this alternative on other wildlife populations would be negligible.

4.4.3.2 Cumulative Impacts

As described in section 4.4.1.2 the impacts from past, present, and reasonably foreseeable future actions within the area have had moderate impacts to wildlife habitat and populations. The additional contribution of negligible and minor impacts from this alternative results in a moderate rating for overall cumulative impacts to wildlife habitat and populations.

4.4.3.3 Conclusion

Alternative C would result in negligible long-term and minor short-term losses of wildlife habitat, and temporary displacement of wildlife species. There would be no risk of human-bear conflicts and bear mortality because temporary access would occur during bears' winter dormancy. Effects on other wildlife populations would be negligible. There would be moderate cumulative effects on wildlife populations and habitat. The level of effects on wildlife with this alternative would not result in an impairment of park resources that fulfill specific purposes identified in the park and preserve enabling legislation or that are key to the natural and cultural integrity of the park and preserve.

4.5 Effects To Cultural Resources

4.5.1 Alternative A – No-Action Alternative

4.5.1.1 Direct and Indirect Impacts

Under Alternative A, access to the McCarthy Creek valley would continue as is presently allowed via airplane, snowmachine, horse, and pedestrian traffic. No permits are required for these modes of access. The valley's only airstrip is situated on the Spokane Placer claim, lying outside this undertaking's area of potential effect. The use of snow machines with adequate snow coverage would not affect the historic fabric of the alignment and pedestrian access at current levels would also be negligible. While horses can disturb the alignment's historic fabric and damage artifacts, the effects of continuing such access at present levels would be minor, because it would not diminish the overall integrity of the resource.

If fuel is transported, spills may occur, and the ensuing clean up and removal of soils would destroy the historic fabric of the alignment. Oil transported by foot traffic onto the uplands may contaminate strata in the archaeological components of historic sites. Due to the close proximity of some historic remains to the alignment, it is possible that these resources could be oiled as well. Depending on the National Register status of the site and the amount of oil spillage, the impact to the cultural resource would range from minor to moderate.

4.5.1.2 Cumulative Impacts

Historic mining activities in the McCarthy Creek valley prior to 1940 established numerous residential and industrial sites and their associated access alignments. Such features are now historic.

The development of inholdings within the McCarthy Creek valley has already destroyed the historic integrity of several potentially National Register-eligible properties, including the Hero Mill Site. Natural events, such as the valley's extreme weather, the periodic flooding of McCarthy Creek, local avalanches, and beaver activity around the Green Butte Mining Camp have also affected the cultural resources within the alignment corridor.

Much of the alignment connecting the Spokane Placer with the community of McCarthy was reopened for mechanized travel by unauthorized brushing and blading in 2002. Access improvements within the McCarthy Creek corridor would increase visitation to the valley, which may increase looting, vandalism, and inadvertent damage to sites within the access corridor.

Some vandalism, looting, and inadvertent damage to cultural resources have occurred under past conditions. Such actions could be expected to continue under this alternative.

Cumulatively, the above actions have produced moderate impacts to cultural resources. Implementing Alternative A (No-Action Alternative) would have a minor additional effect on cultural resources; therefore, the total cumulative impact on cultural resources would continue to be moderate.

4.5.1.3 Conclusion

Implementing Alternative A would have a minor effect on cultural resources. The level of effects on cultural resources with this alternative would not result in an impairment of park resources that fulfill specific purposes identified in the park and preserve enabling legislation or that are key to the natural and cultural integrity of the park and preserve.

4.5.2 Alternative B – Applicants' Proposal

4.5.2.1 Direct and Indirect Impacts

Driving a bulldozer across McCarthy Creek could threaten cultural resources occupying creek banks, such as historic bridge abutments, which are fragile and in various stages of decay. However, due to the high visibility of these abutments, they can be avoided.

The existing alignment crosses or abuts 12 historic sites, one of which, the Green Butte Mining Camp (XMC-096), has been determined eligible for listing on the National Register of Historic Places. Of the 12 sites, only XMC-096, XMC-439 and XMC-044 could potentially be affected by this undertaking.

The lower tunnel, a feature which contributes significantly to XMC-439, could be threatened by vibration from the bulldozer. Such vibration could cause the collapse of the roof, as has already occurred in the upper tunnel. Loss of such a key feature would diminish the integrity of the historic road.

Sites XMC-096 and XMC-044 lie adjacent to the proposed alignment. Provided that the vehicle stays within the alignment, artifacts are not collected and cultural sites are not disturbed, there should be no direct impacts to these cultural resources. These sites would be at risk, due to their integrity being compromised by these types of actions.

Any soil excavation occurring during the cleanup of a fuel spill could affect the integrity of the National Register-eligible alignment by destroying a small portion of its historic fabric. However, the risk of a spill large enough to have a major effect on cultural resources is negligible.

Blading the upper tunnel bypass and the Cutbank section within the current alignment would have a negligible effect on cultural resources. The section bypassing the upper tunnel is not historic, and the historic fabric of the Cutbank section has already been breached.

Driving the bulldozer on a new alignment that is completely within the barren floodplain, such as an alternative alignment bypassing the Five-Mile or Green Butte Millsite inholding, would have a negligible effect on cultural resources.

4.5.2.2 Cumulative Impacts

Past, present and reasonably foreseeable future actions and their impacts are described under the Alternative A (No-Action Alternative). Cumulatively, these actions have produced moderate impacts to cultural resources. Implementing Alternative B would have a minor additional effect on cultural resources; therefore, the total cumulative impact on cultural resources would continue to be moderate.

4.5.2.3 Conclusion

Implementing Alternative B would have a minor effect on cultural resources. The level of effects on cultural resources with this alternative would not result in an impairment of park resources that fulfill specific purposes identified in the park and preserve enabling legislation or that are key to the natural and cultural integrity of the park and preserve

4.5.3 Alternative C – Access On Frozen Ground and Mostly Frozen Water (*NPS Preferred*)

4.5.3.1 Direct and Indirect Impacts

Driving a bulldozer across McCarthy Creek with its blade up would have no effect on cultural resources. Improving a stream crossing by building snow bridges with the bulldozer blade down, would threaten cultural resources situated along the banks, such as historic bridge abutments, which are not readily visible under winter conditions. The stipulation requiring that a park representative be present to locate the features and ensure that they are protected would mitigate any adverse effect to these features which contribute to a National Register-eligible road.

The lower tunnel, a feature which contributes significantly to XMC-439, could be threatened by vibration from the bulldozer. Such vibration could cause the collapse of the roof, as has already occurred in the upper tunnel. Loss of such a key feature would diminish the integrity of the historic road.

Assuming that this activity is conducted on frozen ground covered by adequate snow with the bulldozer blade up, driving a bulldozer on the existing alignment would have a negligible effect on cultural resources, as the historic fabric of the alignment would not be breached.

Any soil excavation occurring during the cleanup of a fuel spill could affect the integrity of the National Register-eligible alignment by destroying a small portion of its historic fabric. However, the absorbent nature of snow and the attached stipulations governing fuel handling make a major spill unlikely and its danger to cultural resources negligible.

Blading the upper tunnel bypass would have a negligible effect on cultural resources, as this section is not historic.

Driving the bulldozer on a new alignment that is completed within the barren floodplain, such as an alternative alignment bypassing the 5-Mile (US 6081), Green Butte Millsite, or Big Ben Millsite inholding, would have a negligible effect on cultural resources.

4.5.3.2 Cumulative Impacts

Past, present and reasonably foreseeable future actions and their impacts are described under the Alternative A (No-Action Alternative). Cumulatively, these actions have produced moderate

impacts to cultural resources. Implementing Alternative C would have a negligible additional effect on cultural resources; therefore, the total cumulative impact on cultural resources would continue to be moderate.

4.5.3.3 Conclusion

Implementing Alternative C would have a minor effect on cultural resources. The level of effects on cultural resources with this alternative would not result in an impairment of park resources that fulfill specific purposes identified in the park and preserve enabling legislation or that are key to the natural and cultural integrity of the park and preserve

4.6 Effects To Visitor Use and Aesthetics

4.6.1 Alternative A – No-Action Alternative

4.6.1.1 Direct and Indirect Impacts

Recreational use and aesthetics would see a minor change from information provided in the Affected Environment section. Pedestrian users, hikers and skiers would see an increase in encounters with vehicles such as snowmachines and off-road vehicles and would have increased encounters with horses and their associated impacts. Visitors traveling the corridor would still experience occasional opportunities for solitude, fairly numerous chances to observe historic mining resources, occasional opportunities to experience natural quiet and wildlife, including bears, the chance to traverse challenging terrain and to wade through the streams, along with the chance to observe arresting scenery along Bonanza Ridge, Green Butte and Nikolai Ridge. Displacement of visitors with trespass concerns regarding inadvertent travel over private property would continue to occur.

4.6.1.2 Cumulative Impacts

Cumulative effects result from the incremental impact of this alternative when added to other past, present, and foreseeable future actions. Impact-causing agents of cumulative effects on visitor use and aesthetics are past mining activity; past, present, and future subsistence and sport hunting; past, present, and future development; past, present, future inholder access. Historic mining activities in the McCarthy Creek valley cleared a number of access alignments and development sites. Most of these areas have stabilized and some have revegetated to near-original communities. In 2002, most of the alignment from the Spokane Placer and Mother Lode claims to the town of McCarthy was opened to mechanized travel by unauthorized brushing, blading, and the creation of several sections of new alignment on pristine land. Several sections have multiple alignments. Recreational use and aesthetics has been affected by this activity and current residential use of inholdings. These activities have affected the natural setting by increasing the visibility of human presence. Consequently, the experience of finding one's own way along the drainage as a recreational user has diminished. Future actions could include use of the new alignment by off-road vehicles for subsistence hunting, as well as some unauthorized use of off-road vehicles for recreation or other purposes. Future actions may also include continued thaw season off-road vehicle use and horse travel along the alignment by the applicant and others, and continued snowmachine travel in the winter. Such access would increase encounters rates with horses and vehicles by hikers. Other future actions include expanded commercial operations by the applicant that could increase visitor use of the area and could introduce new types of recreation. Displacement of visitors that wish to minimize their encounters with vehicles and horses has and will continue to occur. Displacement of visitors with trespass concerns regarding

inadvertent travel over private property would continue. Lastly, increased NPS administrative activities within the drainage could increase visitor's encounters with park personnel. The access activity possible with this alternative would result in minor changes in the quality of visitor use and aesthetics. Further changes could occur in the event that the applicant applies for and receives a permanent right-of-way (ROW) to the inholdings. The details of such a ROW are unknown at this time and cannot be analyzed within the scope of this environmental assessment. Cumulatively, these past, present, and reasonably foreseeable future actions would have moderate impacts to visitor use and aesthetics. The additional contribution of minor impacts from this alternative results in a moderate rating for overall cumulative impacts to visitor use and aesthetics.

4.6.1.3 Conclusion

The Alternative A (No-Action Alternative) would result in minor adverse effects on visitor use and aesthetics. There would be moderate cumulative effects.

4.6.2 Alternative B – Applicants' Proposal

4.6.2.1 Direct and Indirect Impacts

Under this alternative, the impact-causing agents of access would include a bulldozer crossing a stream(s); driving a bulldozer on an existing alignment; blading within an existing alignment; and driving a bulldozer to create a bypass around private property. With this alternative, recreational use and aesthetics would change from the conditions that currently exist. As the alignment receives more use by the applicant's bulldozer, the likelihood of an encounter with the bulldozer would increase. Recreationists seeking hiking opportunities with a more backcountry or primitive experience would experience a diminished recreational experience while those desiring more of a day hike or a less vigorous experience would be attracted to the access corridor. In some areas hiking would be less difficult due to the trampled vegetation by the passing of vehicles, and in other areas this passage of vehicles would make hiking more difficult due to the creation of mud holes or other trail hazards. Accordingly, hikers might have to avoid certain sections of the alignment. Other expected changes would include increased encounters with motorized vehicles. Other motorized vehicles would include the applicant's bulldozer, and other vehicles as well since the alignment would be more easily traversed by off-road vehicles for subsistence hunting, and unauthorized off-road vehicle use for recreation.

4.6.2.2 Cumulative Impacts

As described in section 4.6.1.2 the impacts from past, present, and reasonably foreseeable future actions within the area have had moderate impacts to visitor use and aesthetics. The additional contribution of minor impacts from this alternative results in a moderate rating for overall cumulative impacts to visitor use and aesthetics.

4.6.2.3 Conclusion

Alternative B would result in minor adverse effects on visitor use and aesthetics. There would be moderate cumulative effects.

4.6.3 Alternative C – Access on Frozen Ground and Mostly Frozen Water (*NPS Preferred*)

4.6.3.1 Direct and Indirect Impacts

Under this alternative, the impact-causing agents of access would include a bulldozer crossing a stream(s); driving a bulldozer on an existing alignment; possible fuel spills; blading within an existing alignment; and driving a bulldozer to create a bypass around private property.

Summer recreational use and aesthetics for this alternative would not change from information provided in the Affected Environment section. The reason that there would not be a change in the recreational use and aesthetics is due to the fact that the activity would occur in the winter months when visitation for the most part does not occur. In the summer months when visitation occurs, visitors traveling the corridor would continue to experience occasional opportunities for solitude, fairly numerous chances to observe historic mining resources, occasional opportunities to experience natural quiet and wildlife, including bears, the chance to traverse challenging terrain and to wade through the streams, along with the chance to observe arresting scenery along Bonanza Ridge, Green Butte and Nikolai Ridge. In the winter, a few recreational users could encounter more bulldozer use by the applicant and NPS monitors during the conduct of temporary access.

4.6.3.2 Cumulative Impacts

As described in section 4.6.1.2 the impacts from past, present, and reasonably foreseeable future actions within the area have had moderate impacts to visitor use and aesthetics. The additional contribution of minor impacts from this alternative results in a moderate rating for overall cumulative impacts to visitor use and aesthetics.

4.6.3.3 Conclusion

Alternative C would result in minor adverse effects on visitor use and aesthetics. There would be moderate cumulative effects.

4.7 Effects On Safety

4.7.1 No-Action Alternative

4.7.1.1 Direct and Indirect Impacts

Snow Avalanches: Based upon the location of known and potential snow avalanche zones and our general knowledge of the valley there is a real and potentially major safety concern for individuals traveling along the alignment, especially in the following five areas: two areas proximal to Big Ben Millsite, one area on the Eastside alignment opposite the Cutbank, and two areas within one-half mile downstream of the Marvelous Millsite. Members of the Hale family have spoken of “close calls” they experienced last winter while traveling along their snow machine alignment. The decision to travel along the access alignment would be at the discretion of the applicant.

Aufeis (icing): Areas of icing would likely be encountered along the access corridor while traversing the alignment with snow machines in the winter. With adequate snow cover the applicant would be able to modify his alignment or schedule his travel to avoid areas and periods

of icing. The applicant has successfully utilized this access means previously and therefore we do not major safety concerns.

Flooding: The greatest safety concerns posed by flooding and high water would most likely be associated with periods of high rainfall and or rainfall on snow. There may be periods during the late spring and early fall months when high flows make stream channels crossings unsafe and/or unfeasible. These risks could be mitigated by avoiding passage during high water. Flooding during winter months would most likely be associated with the release of channel blockage by snow and ice. These could be sudden and unpredictable. Monitoring of channel blockage and avoiding reaches down would reduce potential safety threats.

4.7.1.3 Conclusion

An assessment of the avalanche risk has not been undertaken by an avalanche expert, but based upon the location of known and potential snow avalanche zones and our general knowledge of the valley there is a minor to moderate safety concern for individuals traveling along the alignment, and a major concern in those 5 areas listed above during periods of high avalanche danger. There would be no increase in the safety concerns posed by continued access with snow machine, horse and fixed wing aircraft. All these activities in remote mountain setting have inherent risks. In summary, Alternative A (No-Action Alternative) would not pose any additional increase to safety conditions beyond the existing conditions.

4.7.2 Alternative B – Applicants' Proposal

4.7.2.1 Direct and Indirect Impacts

Snow Avalanches: Based upon the location of known and potential snow avalanche zones and our general knowledge of the valley there is a safety concern for individuals traveling along the alignment even when the valley bottom is free of snow, ice and frozen ground in and proximal to the 5 recently active areas listed above. Decisions to travel along the access alignment with a bulldozer may be more likely to trigger a release. Periods of travel would be at the discretion of the applicant. Risk could be reduced by travel in the early morning before warm temperatures soften snow at higher elevations, by avoiding periods of high avalanche danger, and by skirting around known run-out zones.

Aufeis (icing): The ice surface and flows along side slopes or river bottoms may be hazardous because they are slippery or are too steep; these may pose challenges for traversing with a bulldozer and/or trailer. There is a risk of jack-knifing with the trailer or of the bulldozer sliding off the bladed alignment and becoming stuck or turning over. To provide for safe and/or feasible passage along side slopes and over up or downhill gradients, removal of the ice by blading may be necessary. Removal of ice by blading may not always be feasible.

During stream crossings the bulldozer could break through the ice and may be unable to extract its self without another tracked vehicle to pull it out. Stream channel aufeis hazards could be reduced or eliminated by proper alignment reconnaissance and selection to avoid those reached. For example, one would anticipate that the operator would avoid areas of unsafe or active aufeis formation in the flood plain and channel where feasible.

During unfrozen ground conditions there would be no icing in the channel and it is possible that only a small buildup of aufeis would have accumulated locally outside the floodplain where small seeps cross the alignment. During the late fall period we would not anticipate any major hazard

as this is early in the season, although some slippery slopes would warrant prudent equipment operations with a bulldozer and/or trailer.

Flooding: The safety concerns posed by rainfall induced flooding are unlikely. There may be periods during the late spring, and fall months when high flows make stream channels crossings unsafe and/or unfeasible. The risks associated with injury, equipment becoming stuck, fuel spills due to flooding could be mitigated by avoiding stream crossing during periods of high water. Flooding during winter months would most likely be associated with the release of channel blockage by snow and ice. These events could be sudden and unpredictable, but are rare.

4.7.2.3 Conclusion

There is in a minor to moderate increase in risks to safety under this alternative due to the window of operations from aufeis, flooding and snow avalanche. These would have only a minor additional adverse impact on safety conditions if proper reconnaissance, alignment selection and avoidance of dangerous reaches and periods are integrated into operation while transporting of materials and driving the bulldozer within McCarthy Creek Valley.

4.7.3 Alternative C – Access On Frozen Ground and Mostly Frozen Water (*NPS Preferred*)

4.7.3.1 Direct and Indirect Impacts

Snow Avalanches. Based upon the location of known and potential snow avalanche zones and our general knowledge of the valley there is a real and potentially major safety concern for individuals traveling along the alignment, especially in those five areas listed above. Decisions to travel along the access alignment would be done in consultation with the NPS. Risk could be reduced by travel in the early morning before warm temperatures soften snow at higher elevations, by avoiding periods of high avalanche danger, and by skirting around known run-out zones.

Aufeis (icing): The ice surface and flows along side slopes or river bottoms may hazardous because they are slippery or are too steep; these may pose challenges for traversing with a bulldozer and/or trailer. There is a risk of jack-knifing with the trailer or of the bulldozer sliding off the bladed alignment and becoming stuck or turning over. To provide for safe and/or feasible passage along side slopes and over up or downhill gradients, removal of the ice by blading small sections may be necessary. Removal of ice by blading may not always be feasible.

During stream crossings the bulldozer could break through the ice and may be unable to extract its self without another tracked vehicle to pull it out. Stream channel aufeis hazards could be reduced or eliminated by proper alignment reconnaissance and selection to avoid those reached. For example, one would anticipate that the operator would avoid areas of unsafe or active aufeis formation in the flood plain and channel where feasible.

Flooding: The safety concerns posed by flooding and high water would most likely not occur during periods of frozen ground and adequate snow cover as they are associated with periods of high rainfall and or rainfall on snow. Flooding during winter months would most likely be associated with the release of channel blockage by snow and ice. These events could be sudden and unpredictable, but are rare. Monitoring of channel blockage and avoiding reaches down would reduce potential safety threats.

4.7.3.3 Conclusion

There is in a minor to moderate increase in risks to safety under this alternative due to the window of operations from aufeis, flooding and snow avalanche. These would have only a minor additional adverse impact on safety conditions if proper reconnaissance, alignment selection and avoidance of dangerous reaches and periods are integrated into operation while transporting of materials and driving the bulldozer within McCarthy Creek Valley.

5.0 CONSULTATION AND COORDINATION

The following National Park Service staff prepared sections of this EA:

Wrangell-Saint Elias National Park and Preserve
Danny Rosenkrans, Geologist
Eric Veach, Fisheries Biologist
Vicki Snitzler, Chief of Planning
Michele Jesperson, Cultural Resource Management Specialist
Geoff Bleakley, Historian
Steve Hunt, Environmental Compliance Officer
Barbara A. Cellarius, Cultural Anthropologist/Subsistence Specialist

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Kevin Meyer, Environmental Specialist
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Page Spencer, Ecologist
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The following National Park Service specialists were consulted during preparation of this EA:

Wrangell-Saint Elias National Park and Preserve
Gary Candelaria, Superintendent
Mason Reid, Wildlife Biologist
Devi Sharp, Chief of Resources

National Park Service, Regional Office
Marcia Blaszak, Acting Regional Director
Victor Knox, Acting Deputy Regional Director

National Park Service, Alaska Support Office
Joan Darnell, Team Manager, Environmental Resources

The State of Alaska and the U.S. Army Corps of Engineers were notified in advance that the EA was being prepared.

A copy of the EA was sent to the following federal and state agencies (though not listed, the EA also was mailed to several individuals and organizations):

- Alaska Department of Fish and Game
- Alaska Department of Environmental Conservation
- Alaska Department of Natural Resources
- Alaska Office of the Governor
- US Department of Agriculture, Chugach National Forest
- US Department of the Interior, Office of Environmental Policy and Compliance
- US Environmental Protection Agency, Region 10

- University of Alaska, Statewide Office of Land Development
- Ahtna Incorporated

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7.0 APPENDICES

APPENDIX A – APPLICANTS' APPLICATION AND SUBSEQUENT CORRESPONDENCE

JP 9/2/03

J. P. Tangen

Attorney at Law
310 K Street, Suite 200
Anchorage, AK 99501

RECEIVED
SEP 2 2003
BY:

September 2, 2003

Gary Candalaria, Superintendent
Wrangell-St. Elias National Preserve
PO Box 439
Copper Center, AK 99573-0439

Dear Mr. Candalaria:

RE: STANDARD FORM 299 DRAFT application for EMERGENCY ANILCA access Wrangell St. Elias National Preserve – McCarthy Creek Road to lands of Butterfly Sunstar, Nava S. Sunstar, Joshua Hale [a/k/a the Pilgrims]

Enclosed please find the above referenced application papers.

Because the signed copies from the Pilgrims are somewhat degraded from necessary multiple generations of faxed transmittal due to their remote location and poor communications we have submitted a clear original print of the form which will be easier for your staff to read and process as well as the signed (faxed) copies for necessary authentication.

Due to the rapidly approaching end of the season, we have submitted this application for emergency relief in the present form. We recognize that some modifications may be required in order to ensure that the NPS has all the information it needs to expedite approval, however, we request authorization to start moving in winter provisions as quickly as possible. We will undertake to supply any additional information you may require promptly, taking into consideration the remoteness of our location, health considerations, and our limited resources. It is our expectation that an application for permanent access can be dealt with over the winter.

Please call on me any time if there are any questions.

Sincerely,

J.P. Tangen
Attorney for the Pilgrim family
ABA # 7507051

Enclosure: As indicated

Cc w/ encl.: Director, NPS Alaska Region NB 9/2/03
Cam Toohey, Special Assistant to Secretary Gale Norton
Chris Bockmon, DOI Solicitor's Office
Bruce Landon, DOJ

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LETTER OF TRANSMITTAL [for permit version B]

Robert Arnberger
Alaska Region Director
National Park Service
240 West 5th Avenue, Room 114
Anchorage, Alaska 99501

RE: STANDARD FORM 299 application for EMERGENCY ANILCA access
Wrangell St. Elias National Preserve – McCarthy Creek Road to lands of
Butterfly Sunstar, Nava S. Sunstar, Joshua Hale [Pilgrims]

Dear Mr. Arnberger:

On June 13, 2003 our attorney, J.P. Tangen, and members of our family, Robert Hale Pilgrim and David Pilgrim met with you about access to our property in the McCarthy Creek valley. At that meeting Mr. Chris Bockmon stated that all ANILCA permits ever done by NPS went through him and in response to Mr. Tangen's questions as to what form to use he said there is no particular form and to just send something in asking for access. Therefore on July 8, 2003 we emailed Superintendent Gary Candelaria asking for emergency access. We have received no substantive answer to that plea.

We understand that Mr. Bockman subsequently offered a form SF 299 and offer of help to Mr. Tangen. We desire to cooperate and therefore are making this application again on this particular form.

****

Please understand that these delays have now caused the situation to become very urgent for us with winter coming on. We must transfer supplies between McCarthy and the Homestead before freeze up. Latest date for go-ahead is 9/30/03. We hope very much to have an early response so that we can do the necessary planning for this task.

****

This application covers only our immediate needs. An application for permanent access requirements will be submitted at a later date.

Sincerely yours,

[see attached faxed copies for signatures]

Butterfly Sunstar, Nava S. Sunstar, Joshua Hale ~~or signed by JP Tangen?~~

Attach: SF299 for emergency access

K:\Pilgrims.SF299.transmittal.doc

DRAFT B (8/27/03) - EMERGENCY BULLDOZER DEADHEADING ONLY

STANDARD FORM 299 (2/2003)
Prescribed by DOI/USDA/DOT
P.L. 96-487 and Federal Register Notice 5-22-95

APPLICATION FOR TRANSPORTATION AND UTILITY SYSTEMS AND FACILITIES ON FEDERAL LANDS

FORM APPROVED
OMB NO. 1004-0189
Expires: October 31, 2005

NOTE: Before completing and filing the application, the applicant should completely review this package and schedule a preapplication meeting with representatives of the agency responsible for processing the application. Each agency may have specific and unique requirements to be met in preparing and processing the application. Many times, with the help of the agency representative, the application can be completed at the preapplication meeting.

FOR AGENCY USE ONLY
Application Number
Date filed

1. Name and address of applicant *(include zip code)*
Butterfly Sunstar, Nava S. Sunstar, Joshua Hale
PO Box MXY, Glennallen AK

2. Name, title, and address of authorized agent if different from Item 1 *(include zip code)*
JP Tangen, 1600 A Street, Suite 310
Anchorage, AK 99501-5148 ???

3. TELEPHONE *(area code)*
Applicant (907) 554-4473
Authorized Agent (907) 222-3985 ???

4. As applicant are you? *(check one)*
- a. ☒ Individual
- b. ☐ Corporation*
- c. ☐ Partnership/Association*
- d. ☐ State Government/State Agency
- e. ☐ Local Government
- f. ☐ Federal Agency

* *If checked, complete supplemental page*

5. Specify what application is for: *(check one)*
- a. ☐ New authorization
- b. ☐ Renewing existing authorization No.
- c. ☐ Amend existing authorization No.
- d. ☐ Assign existing authorization No.
- e. ☐ Existing use for which no authorization has been received*
- f. ☒ Other* ANILCA Sections 1110(b), 1109 inholding access

* *If checked, provide details under Item 7*

6. If an individual, or partnership are you a citizen(s) of the United States? ☒ Yes ☐ No

7. Project description *(describe in detail):* (a) Type of system or facility, *(e.g., canal, pipeline, road);* (b) related structures and facilities; (c) physical specifications *(length, width, grading, etc.);* (d) term of years needed; (e) time of year of use or operation; *(f) Volume or amount of product to be transported;* (g) duration and timing of construction; and (h) temporary work areas needed for construction *(Attach additional sheets, if additional space is needed.)*

EMERGENCY ACCESS essentially over existing 100 year old road by bulldozer deadheading (blade generally up) with a trailer and/or tracked vehicles. Road is approximately 15 miles long from McCarthy to Homestead, Marvelous Millsite (USMS 1082-B) continuing to Spokane parcel (USMS 875).

****

There is an immediate and urgent emergency need to transfer supplies between McCarthy and Homestead before freeze up. Latest date for go-ahead is 9/30/03. This was asked for on our first request for a permit to Supt. Candelaria dated 7/8/03.

****

NOTE: This application covers only immediate needs. An application for permanent access *requirements will be submitted at a later date.*

8. Attach a map covering area and show location of project proposal Map is attached

9. State or local government approval: ☐ Attached ☐ Applied for ☒ Not required

10. Nonreturnable application fee: ☐ Attached ☒ Not required

11. Does project cross international boundary or affect international waterways? ☐ Yes ☒ No *(If "yes," indicate on map)*

12. Give statement of your technical and financial capability to construct, operate, maintain, and terminate system for which authorization is being requested.

Not Applicable under ANILCA.

IMPORTANT NOTE: This application is filed under protest and we reserve all our rights not to accept unreasonable permiting requirements. There are NO provisions in ANILCA that allow agencies to require permits before use of ANILCA guaranteed access to inholdings. In making this application we yield none of our rights.

WE DO, HOWEVER, DESIRE TO COOPERATE AND THEREFORE ARE MAKING THIS APPLICATION.

(Continued on page 2)

13a. Describe other reasonable alternative routes and modes considered.

There are no other reasonable alternatives to the all-season surface route requested. Air only, winter only access is UNACCEPTABLE and is not feasible for economic and other purposes.

b. Why were these alternatives not selected?

See Item 13a.

c. Give explanation as to why it is necessary to cross Federal Lands.

See item 13a. Our property is totally surrounded by NPS lands. Title XI of ANILCA requires that inholders be given reasonable access across federal lands to their property. The McCarthy Creek Road is the only reasonable surface route to our inholdings.

14. List authorizations and pending applications filed for similar projects which may provide information to the authorizing agency. *(Specify number, date, code, or name)*

We have received no substantive answer to our previous emergency access request (the same as asked for in THIS application). It was made by email dated July 8, 2003 to Superintendent Gary Candelaria.

15. Provide statement of need for project, including the economic feasibility and items such as: (a) cost of proposal *(construction, operation, and maintenance)*; (b) estimated cost of next best alternative; and (c) expected public benefits.

Access using the road is needed for inholders to access their properties for personal and business purposes. Air transportation would be prohibitively costly. Public benefits are derived from recreational opportunities to be provided by a diversity of choices for visitors to the park (horseback riding etc.)

16. Describe probable effects on the population in the area, including the social and economic aspects, and the rural lifestyles.

No direct effects except to note that this access will specifically preserve and continue rural lifestyles.

17. Describe likely environmental effects that the proposed project will have on: (a) air quality; (b) visual impact; (c) surface and ground water quality and quantity; (d) the control or structural change on any stream or other body of water; (e) existing noise levels; and (f) the surface of the land, including vegetation, permafrost, soil, and soil stability.

Negligible. Very minor. There are no sensitive or thaw unstable permafrost areas. The road crosses very little permafrost of any kind. No significant clearing is needed beyond the existing road. Soil types crossed by the route are such that erosion will be negligible because in areas of significant slope they are generally coarse-grained and not subject to slope instability.

18. Describe the probable effects that the proposed project will have on (a) populations of fish, plantlife, wildlife, and marine life, including threatened and endangered species; and (b) marine mammals, including hunting, capturing, collecting, or killing these animals.

a) Negligible; no rare, threatened or endangered plant or animals will be affected by this permit. b) Not applicable.

19. State whether any hazardous material, as defined in this paragraph, will be used, produced, transported or stored on or within the right-of-way or any of the right-of-way facilities, or used in the construction, operation, maintenance or termination of the right-of-way or any of its facilities. "Hazardous material" means any substance, pollutant or contaminant that is listed as hazardous under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended, 42 U.S.C. 9601 et seq., and its regulations. The definition of hazardous substances under CERCLA includes any "hazardous waste" as defined in the Resource Conservation and Recovery Act of 1976 (RCRA), as amended, 42 U.S.C. 9601 et seq., and its regulations. The term hazardous materials also includes any nuclear or byproduct material as defined by the Atomic Energy Act of 1954, as amended, 42 U.S.C. 2011 et seq. The term does not include petroleum, including crude oil or any fraction thereof that is not otherwise specifically listed or designated as a hazardous substance under CERCLA Section 101(14), 42 U.S.C. 9601(14), nor does the term include natural gas.

None expected

20. Name all the Department(s)/Agency(ies) where this application is being filed.

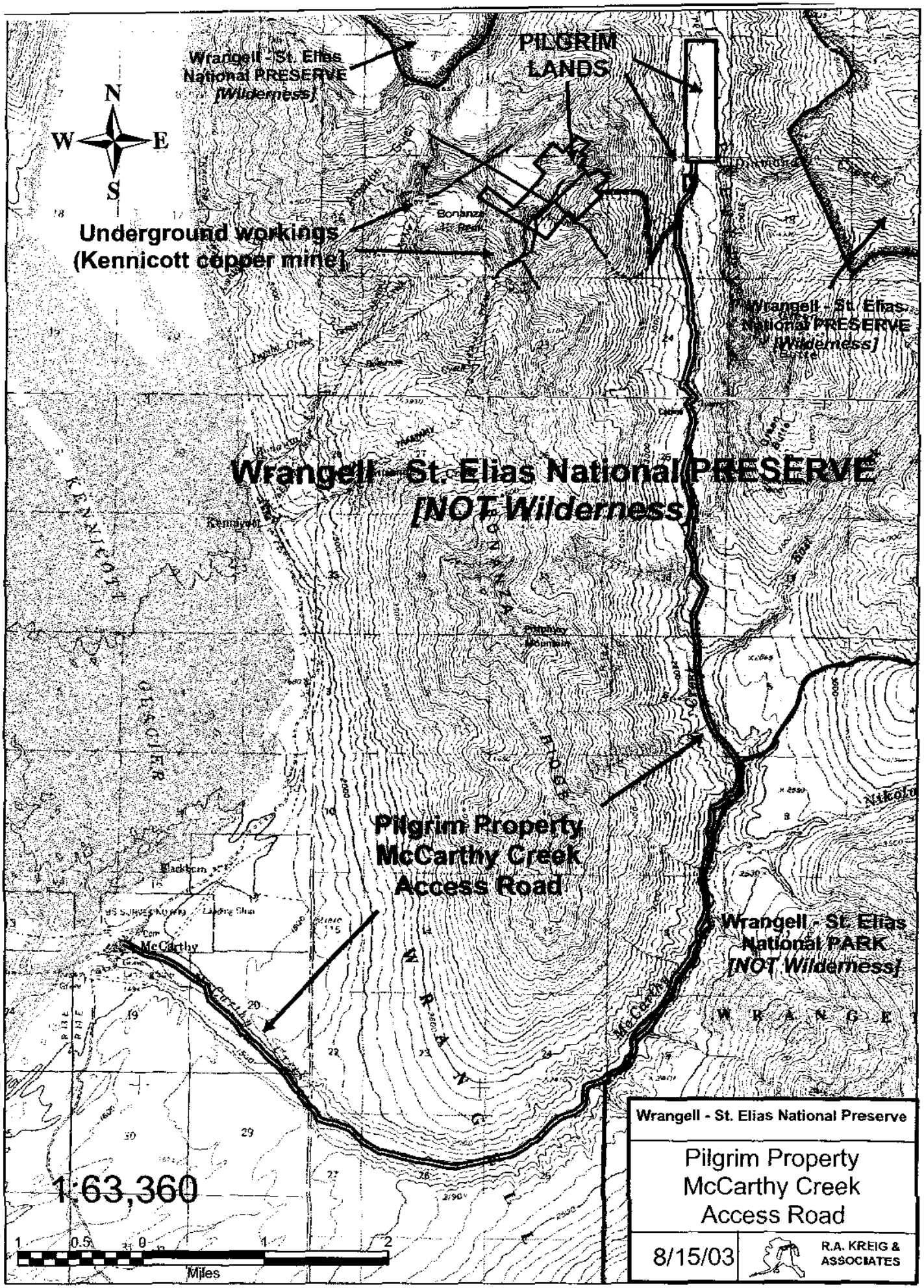
National Park Service Regional Director - Anchorage / cc: Gary Candelaria

I HEREBY CERTIFY, That I am of legal age and authorized to do business in the State and that I have personally examined the information contained in the application and believe that the information submitted is correct to the best of my knowledge.

Signature of Applicant	[see attached signed fax copies]	Date	8-30-03

Title 18, U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious, or fraudulent statements or representations as to any matter within its jurisdiction.

(Continued on page 3)


Wrangell - St. Elias National PRESERVE [Wilderness]
PILGRIM LANDS
N
W
E
S
Underground workings (Kennicott copper mine)
Wrangell - St. Elias National PRESERVE [Wilderness]
Wrangell - St. Elias National PRESERVE [NOT Wilderness]
Pilgrim Property McCarthy Creek Access Road
Wrangell - St. Elias National PARK [NOT Wilderness]
McCarthy
Kennicott
1:63,360
1 0.5 0 1 2
Miles
Wrangell - St. Elias National Preserve
Pilgrim Property McCarthy Creek Access Road
8/15/03
R.A. KREIG & ASSOCIATES
Wrangell-StElias[Pilgrim_Area_Map].mxd

United States Department of the Interior

NATIONAL PARK SERVICE
Wrangell-St. Elias National Park/Preserve
Mile 106.8 Richardson Hwy. P.O. Box 439
Copper Center, AK 99573
907 822 5234 Fax 907 822 7216

Mr. J. P. Tangen
Attorney at Law
1600 A Street, Suite 310
Anchorage, AK 99501

September 8, 2003

Dear Mr. Tangen:

Thank you for the letter and the SF-299 application for what you have described as emergency access to the Marvelous Millsite, submitted on behalf of your clients Butterfly Sunstar, Nava S. Sunstar and Joshua Hale also known as the Pilgrims. We understand from the documents submitted that this is not a request for permanent access. We also understand that request may be submitted at a later date.

The application describes the proposed access route as essentially over the existing old road. Our preliminary review of the damage caused by your clients, starting in the fall of 2002, shows that there are several routes created in some locations. Please identify which of the several routes are proposed for use at this time. The routes created last fall cross several areas that appear to wetlands, and cross McCarthy Creek approximately 13 times between McCarthy and the Marvelous Millsite. These routes were not properly constructed to provide drainage or to sustain the impacts of heavy equipment. These considerations compel us to be particularly concerned about the possibility of additional permanent harm to park resources.

The application does not provide sufficient information to allow us to address the request. Please provide the following information: How many trips are planned and when will those trips occur? The application identifies the proposed vehicle(s) as a "bulldozer deadheading (blade generally up) with a trailer and/or tracked vehicles." In order to evaluate the impact of the vehicles we need to know the size and types of equipment contemplated. When would the blade not be up? Please clarify the meaning of the word "deadheading" in the application.

The application characterizes the request as an emergency request. Please explain the nature of the emergency. The request indicates that the need is to transfer supplies prior to freeze up. Special Use Permits have been granted in the past for access to inholdings with heavy equipment such as bulldozers during the winter months when the ground is protected by snow of sufficient depth, generally 6" – 12", or more or a combination of snow and frost depth sufficient to protect the underlying vegetation and soil. Under these conditions the damage that could be done by the equipment is limited. Previous applicants have been able to adapt to the winter schedule for freighting supplies and building materials. Travel over unfrozen ground causes significantly more damage. Travel over unfrozen ground by heavy equipment falls outside of any environmental assessment previously undertaken by the Park and therefore will required a more extensive review under the National Environmental Policy Act, most likely an environmental assessment (EA).

We are also concerned about the issue of the multiple stream crossings needed to travel from McCarthy to the Marvelous Millsite. Recent fisheries inventories lead us to believe that McCarthy Creek may be inhabited by spawning anadromous fish. The presence of an anadromous fishery requires that we consider the stream crossings under the National Environmental Policy Act.

In addition to our concerns mentioned in this letter please be aware that a permit may be required from the Alaska Department of Fish and Game for a stream crossing, if the stream carries anadromous fish.

We appreciate your efforts to help us understand the needs of your clients in this matter. We will address the request as soon as we have adequate answers to the issues raised above.

Sincerely,

Gary Candelaria
Superintendent
Wrangell-St. Elias NP/P

Pilgrims at Hillbilly Heaven, McCarthy Creek, Alaska to Gary Candelaria, September 14, 2003
Subject: EMERGENCY ACCESS APPLICATION

1

COVER SHEET

From Pilgrims at Hillbilly-Heaven

Subject EMERGENCY ACCESS APPLICATION

TO GARY CANDALERIA

I HOPE THIS WILL BE ~~TO~~ MANY A WAY ~~OF~~
TO benifit "THE WAR IN THE WRANGLES"
TO BRING ABOUT AWARENESS, UNDERSTANDING
AND A Hopefull OPORTUNITY FOR NPS TO
WORK Together with us I SEE THIS AS THE OPPORTUNI
To peacefully work Together OR AN Indictement of the LIABILITY OF THEIR
TO OWN LAW
OF SELFISH
GREEDY + HATEful
ATTITude

---

(1)

WERE SO excited GARY THAT YOU REALLY WANT TO Help AND FACE ~~PLACE~~ difficult situations Together with us

IT SEEMS THAT FOR THE FIRST TIME YOU ARE OPEN TO CONSIDER other people, families, their LIVES AND THEIR NEEDS — THIS IS GREAT AND A welcomed SIGN THAT INSTEAD OF Hidding your own laws from us until we break them - your letting us know before hand - ACTUALLY ASKING for ANSWERS that would be USED IN MAKING OUR ~~LIFE~~ TRADITIONAL LIFE STYLE LIVABLE.

You KNOW AS WELL AS I, THAT YOUVE NOT ONLY Allowed others to use this ROAD without Permit AFTER it Became A NATIONAL PARK, But it has also been USED CONSTANTLY by A continuous flow of people's that Traveled to provide both TRADITIONAL USES AND ECONOMIC NEEDS FOR THEMSELVES for OVER 60 yrs. AFTER THE CLOSE OF THE GREEN/BUTE AND Mother Lode mines

2 ... NOT WITHSTANDING SUCH LAWS AS ANILCA 1110B, RS 2477 AND the "ALASKA STATEHOOD ACTS" THE Guaranteed ACCESS to THE Peoples of ALASKA ON CERTAIN ROAD WAYS SUCH AS OURS, THERE ALSO EXIST BETWEEN THE Peoples OF THIS EARTH and OUR NATION A Democratic ENDEAVER TO CONSIDER ONE ANOTHER, THEIR NEEDS, Families AND TRADITIONS — emplified in GOOD will, RED CROSS, CHURCHES, bread lines, Welfare organizations AND community SPIRIT.

AS A WILDERNESS Family from day one we exemplify "TRADITIONAL AND Customary use" THE ROAD itself expresses the Historic and personability OF A ROAD THAT PIONEERED THIS country THE LAST Frontier A Land of extrems, hardships AND dangers, blood, Tears AND Laughter of it Peoples. — To wipe out its people AND access, would not only make it virtually unenjoyable for 99.9% of THIS Countrys peoples, but would as in THE Case of "Cades Cove", RID THE wilderness OF SUCH Beauty AND Flavor OF Love, THAT its TRUE NATURE AND Meaning would BE LOST.

My Application is THEREFORE based ON THE NEED FOR preservation AND continuation OF THE AGE Old ROAD ACCESS and FOR THE People THAT TRAVEL it, IN THAT TRADITIONAL and Customary way. According TO History, TRADITION AND LAW I don't believe THAT Permitting is IN ANY WAY A Valid ALTERNATIVE, But FOR THE SAKE OF GOOD will AND NEIGHBORSHIP I submit THE Supplementous information you ASK FOR, HOPING FOR ALL SAKES THAT THIS ISN'T A devious deployment OF STALL TACTICS, but THAT your letter does have inherit IN it A TRUE desire TO Help AND work with us.

A LOT OF THESE questions you ASK about for us TO Clarify seem redundant, but I will offer MY BEST SHOT AT THEM SO THAT you CAN UNDERSTAND ALL aspects, especially THE NEED FOR EMERGENCY ACCESS.

You spoke about several routes existing - I personally know of only one road that accesses the Mother Lode properties - It is the shortest, and most expedient, as well as environmentally safe. You could be referring to such roads as the Wigger upper road, or possibly old routes that led up to Green-Butte Bunk house. There would possibly need to be alternative routes because of rock slides etc. But after your own multi-thousand dollors accessment of the road you should be able to determine this - for yourself! The route is very obvious, As for wetlands I know of one area only 60 yds possibly and a few muddy places during the rainy season, has been used for almost a hundred years continually till present, and there is no evidence of such problems or constructions any where on this obvious road way for drainage

I laughted when you said the Application didnt provide sufficient info to allow you to address the request - when I first talked to Rob Arnberger, Head of NPS in AK and his legal adviser Chris Bockman they emphatically declared that there was no application at all - told me to write it down and send it. JP. also in his perplexity over it suggested that I do the same - I. DID

58 Then I recieved a form and application from NPS - and response was complete and Thorough - It was your form - not ours. Now you want more info am I correct?

Here goes my best shot at meeting your needs in hopes that you have this opportunity to listen and act accordingly - and you wont prove yourself to be a "stone waller" (a stonewaller is in my definition a person who acts in such a deceptive manner that important issues are not acted on, but put off by more and more supleneous and senseless rhetoric, designed to evade the real issues at hand)

Q. How many trips? It will take 4 trips of food for animal (dogs, horses, goats, chickens) and feed, and another 4-5 trips to provide food, building supplies, tools, saw mill, personal emegency need for 17 people, clothing, windows, insulation, roofing materials, bedding and many personal items, such as soaks and underware.

When?

Q. These trips must occure in the 10th and 11th months of 2003.

4)

Q AS FAR AS SIZE AND Type of equipment THAT will BE USED? - Something Along the Lines of A SMALLER D-4 Dozer would BE USED with Trailer of 16' Size estimated - ALTHOUGH Equip used and # of Trips could VARY ON CONDITIONS AND ABILITY

Q WHEN WOULD BLADE NOT BE UP? BLADE would BE up except when encountering ROCK SLIDES which ~~could~~ ARE Very few INDEED

Q "DEAD HEADING" MEANS BLADE up AND NOT USED EXCEPT FOR Emergency Application

Q I would Like To Recieve Proof of SPAWNING ANadromous Fish IN McCARTHY CREEK - AND IF SO, How FAR up, AND WHERE THEY Begin - HISTORICALLY ITS Never had fish, being pure glacier feed AND NO SIGHTINGS THAT CAN BE Documented. NOT TO MENTION THAT THE STREAM has been CROSSED 1,000 of TIMES IN THE FAR and Near PAST - Documentation IS Abundantly AVAILABLE ABOUT THESE AS You KNOW.

QUESTIONS: PLEASE EXPLAIN NATURE OF EMERGENCY!
I will Try To EXPLAIN THIS IN Possibly THREE CATAGORIES

I. THE ACTUAL Physical NEEDS
II. THE UNFEASABILITY OF WINTER TRAVEL To Supply emergency NEEDS.
III. THE "OPEN WINDOW" CONCEPT SO indigenous To Alaska BUSH LIVING.

THE NEEDS: OUR CABIN BURNT down IN The devestating STORM THAT HIT this PART OF ALASKA AROUND April of 2003. -35° Temps Rolled down our Valley pushed by WINDS THAT EXCEEDED 100 MPHS - The Older FAMILY members were Out ON THE TRAIL AT THE TIME AND "MAMA COUNTRY ROSE" AND her SMALLER CHILDREN FOUGHT THE BLAZE with courage. UPON RETURN OF THE REST OF THE FAMILY, only TEARFUL eyes and broken AWED hearts were found STANDING AMONG the flame SOAKED smoldING REMNANTS OF ALL THAT WE HAD - IN THE MONTHS following A ALL OUT effort WAS put Forth To Replenish NECESSARY AND EMERGENCY NEEDS. GATHERED Below IN McCARTHY we waited for THE Perfect moment To Bring it Home. Decieved By A local RANGER "STEVENS" - PARK OFFICIALS IN A STING operation

WERE INFORMED WHEN WE would Bring these emergency Supplies Home, AND THE NPS Closed THE MOTHER-LODE ROAD TO ALL MOTORIZED VEHICLES FOR THE FIRST TIME IN Almost A HUNDRED years — TO KEEP US FROM personally being ABLE TO GO Home AGAIN — JUST DAYS BEFORE OUR PLANNED departu THIS "STING OPERATION" AND NEW LAW written By NPS, left us without being ABLE TO Supply OUR NEEDS, OR REBUILD. NOW WINTER IN ALASKA Approaches - NEEDS GROW AS WINTER has demands THAT MUST BE MET Any unwillingness on NPS PART AT THIS POINT could BE CONSIDERED Attempted MURDER for ANIMALS AND People hardships. THEY would prove TO BE VERY Serious IN Reprocushens IF DENIED EMERGENCY ACCESS. NOTE worthy is OUR EFFORT TO Approach THE SISTUATION IN A Lawfull MANNER - NOT Breaking THE SELF MADE LAWS OF THE NPS, AND ACTING with good FAITH and INTEGRITY. THE Pilgrim FAmily MEMBERS ONE AND ALL HOPE AND PRAY THAT WE CAN Begin TO WORK Together TO FASILITATE A "GOOD-WILL EFFORT TO WORK TOGETHER, HAVING BOTH THE COMMON GOAL OF Preservation FOR THIS WONDERFULL LAND OF ALASKA IN WHILE Respecting People, Lives, goals, Hopes, AND Dreams THAT EXPRESS GOVT By THE People, for THE PEOPLE.

WE WANT TO Prove OURSELVES!
DO YOU WANT TO Prove YOURSELVES!?

II THE UNFEASABILITY OF WINTER TRAVEL!

1) THE POSSIBILITY OF AIRLIFTS ARE NOT Possible due TO EXTREME expense, AND Lack of ABILITY TO HAUL FUEL, Big objects such AS Tools, WINDOWS, Building supplies ETC. - NOT Forgetting SNOW covered AIRSTRIP. OF Course YOU could offer A Helicopter AS YOU'VE MADE hundreds of Flights up here ALready - BUT I WOULD NOT BE ABLE TO except such A WASTE of TAX PAYERS monies, WHEN I Am perfectly ABLE TO PROVIDE FOR Myself, IF GIVEN THE OPPORUNITY

6

2) WINTER TRAVEL AND TIMMING WILL NOT provide our extrem emergency needs
You could easily say "IF YOU DON'T NEED THEM BEFORE THE MIDDLE OF WINTER THEN YOU DON'T NEED THEM !
WE CAN NOT WAIT TILL THEN TO SEE! TO EAT! TO SLEEP! TO Build! TO TRANSPORT! TO FEED ANIMALS! OR TO BE WARM!

3) THE BIGGEST REASON FOR OUR EMERGENCY NEED IS BECAUSE YOU SHUT OFF OUR ACCESS (THAT IS GUARANTEED) DAYS BEFORE. WE WERE PREPARED TO MEET OUR OWN NEEDS LAST SPRING
WE'VE RUN OUT OF EVERYTHING AND WE CAN'T WAIT TILL THE MIDDLE OF WINTER TO Re-Supply!
IF I RECALL correctly EVEN STATE GAME AND FISH Regulations GIVE permission TO hunt IN EMERGENCY SITUATIONS — I HOPE your hearts AND LAWS ALSO ARE AT least AS MERCIFUL

(3) HORSES, GOATS, CHICKENS, CATS, DOGS CAN'T WAIT TILL -40° AND 3 FT of SNOW TO EAT

(4) MACHINERY — SNOW MACHINES - Horses etc. HAVE EXTREM PROBLEMS IN Mid WINTER during -30° COLD & SNOW.

(5) Sometimes it doesn't SNOW, AND WE CAN'T Rely ON YOUR Timming TO come home with supplies

(6) IN Cold weather, foods, VARNISHES, glues, PAINTS, LAQUERS MILK AND DRINK etc ARE RUINED BY FREEZING —

(A) AND WHAT GOOD IS Building Supplies THAT you can't use! Cement, FOUNDATIONS etc. when it's VERY Cold. ARE impossible TO CONSTRUCT with AND USE.

(B) 50% of the Time RIVERS Break up, causing flood conditions THAT would SOAK LOADS THAT Time OF Year —

(7) WARM-UPS IN THE WINTER OFTEN BREAK OUT ICE BRIDGES NATURALLY FORMED OR EVEN BREAK OUT MANY THAT WE MAKE BY HAND.

(8) SNOW MACHINES ARE UNRELIABLE — WE HAVE THE SMALL JUNIORS, OLDER MODELS, THAT NEED ALOT OF WORK MECHANICA CONSTANTLY — THEY WILL NOT BE ABLE TO BRING LOADS, AND BESIDES BY THE TIME YOU COULD USE THEM IT WILL BE TO LATE — MANY OF THE SNOW MACHINE TRIPS WERE ONLY ACCOMPLISHED WITH BLOCK AND TACKEL — SNATCH BLOCKS AND TOOK MANY HOURS TO TRAVERSE THE HILLS AND GLACIERS.

(9) IN WINTER TRAVEL IS EXTREMLY DANGEROUS FOR THESE REASONS:

A) AVALANCHES LURK ON THE VALLEY WALLS AND EXTREME CAUTION IS REQUIRED — SILENT AND SPEEDY MANUVERABILITY IS REQUIRED THAT A DOZER DOESN'T HAVE!

B) GLACIERS FORM ICE HYWAYS ON MOUNTAIN CLIFFS THAT SEEM TO DARE YOUR COURAGE, THREATENING TO SWALLOW DOZER, HORSE + WAGON, AND EVEN SNOW MACHINE OFF THE SIDE, AND MADE MUCH WORSE BY HEAVY SWINGING LOADS ON MT. ICED TRAILS WITH LOADED TRAILERS.

(10) "SHELF ICE" ON THE SIDES OF MCCARTHY CREEK REPRESENT IMPASSIBLE PASSAGE AS THEY FORM OVER 10' AT TIMES, HARDER THAN CEMENT — CREATE DROP OFFS THAT CHALLENGE EVEN A D-9 DOZER

(11) THE EVENT OF INJURY TO HORSES, PEOPLE AND EQUIPMENT IS GREATLY INCREASED IN THE WINTER SEASON.

THERE IS NO REASONABLENESS IN A "LAW OF PERMITTING" ONE TO RISK LIFE, INJURY, AND DESTRUCTION OF SURVIVAL TOOLS.

III THE "OPEN WINDOW" CONCEPT.

Here IN ALASKA we who live THE Bush-MOUNTAIN Life Styles KNOW how IMPORTANT TIMING IS FOR SURVIVAL - A MUST THAT ABSOLUTELY CAN NOT BE IGNORED ! THERE IS A "OPEN WINDOW" IN THE FALL during THE 10th and 11th MONTH OF THE YEAR THAT ONE CAN TRAVEL TO AND FROM HOMESTEADS such AS OURS, "HILLBILLY HEAVEN".

ON THE ONE HAND YOU have FROZEN, AND UN MUDDY ground TO TRAVEL ON. THE TEMPERATURES ARE NOT SEVERE / you have MUCH ground COVER from the FALLING LEAVES, WHILE GRASSES ARE GOING dormant, THE PARTIALLY FROZEN ground AND colder Temp AND EASY RIVER PASSAGES due TO LACK OF RAIN AND GLACIER MELT - AFFORD EASY AND LOW WATER PASSAGES, WHICH LATER will SWELL with FALSE ICE DAMS and FLOODING.

IF ANY FISH WERE TO be proven, they ALSO would be GONE AND ABSOLUTELY NOT EXISTENT. (THIS IS NOT Applicable ALthou ALMOST TRACK-less PASSAGE, - AFFORDING SAFTEY, QUALITY SOIL PROTECTION AND expediently FAST TRIPS would be OBTAINED -

WORK AND BUILDING AT THE HOMESTEAD SIGHT would ALSO be PRACTICAL

WHILE FOOD, CLOTHING, FEED, Tools, FUEL etc would be home when AND WHERE YOU NEED THEM !

WE MUST REMEMBER Here and IN Suburbia AK that EVERY TRAIL, CAT ROAD, ROAD, STREET, TOWN, CITY and DRIVE WAY WAS carefully ORCHASTRATED with A BULL DOZER excluding THE ALCAN Hwy IN WAR TIMES.

THIS WINDOW OF OPPORTUNITY BELONGS TO YOU ALSO, AN opportunity TO WORK TOGETHER with FAMILIES, COMMUNITY MEMBERS - TO show your "STUFF"

AS WELL FOR US TO provide THE EMERGENCY NEEDS Required - Remember your addressing A family that RIVALS small villages IN Numbers here IN ALASKA.

(9

WE'VE ALREADY HAVE HAD TO KILL TWO OF OUR MILKING GOATS for lack of feed [redacted].

FOOD IS VERY LOW, WINDOWS ARE BROKEN BY MADRADIAN Bears, Temperatures are dropping, NO INSULATION TO the pain WHEN MY WIFE AND I DECIDED TO MOVE OUR BED TO ANOTHER ROOM LAST NIGHT WE FOUND IT FROZEN TO THE FLOOR.

ARE YOU WANTING TO BE ACCOUNTABLE FOR HELPING YOUR NEIGHBORS, OR HELD LIABLE FOR UNCALLED FOR ATTACKS AS the "disciples of misery"

WE ASK YOU give US OUR ACCESS THAT WE CAN Begin to work TOGETHER.

THE Pilgrims

ANNOTATED WITH COMMENTS INTERLEAVED BY RAY KREIG FROM THE PILGRIMS 9/14/03 LETTER IN ARIAL FONT

United States Department of the Interior

NATIONAL PARK SERVICE
Wrangell-St. Elias National Park/Preserve
Mile 106.8 Richardson Hwy. P.O. Box 439
Copper Center, AK 99573
907 822 5234 Fax 907 822 7216

Mr. J. P. Tangen
Attorney at Law
1600 A Street, Suite 310
Anchorage, AK 99501

September 8, 2003

Dear Mr. Tangen:

Thank you for the letter and the SF-299 application for what you have described as emergency access to the Marvelous Millsite, submitted on behalf of your clients Butterfly Sunstar, Nava S. Sunstar and Joshua Hale also known as the Pilgrims. We understand from the documents submitted that this is not a request for permanent access. We also understand that request may be submitted at a later date.

> This is a great and welcomed sign that instead of hiding your own laws from us until we break them – you're letting us know before hand. Actually asking for answers that would be used in making our traditional lifestyle livable.

The application describes the proposed access route as essentially over the existing old road. Our preliminary review of the damage caused by your clients, starting in the fall of 2002, shows that there are several routes created in some locations. Please identify which of the several routes are proposed for use at this time.

> You know as well as I, that you've not only allowed others to use this road constantly by a continuous flow of people's that traveled to provide both traditional uses and economic needs for themselves for over 60 yrs. after the close of the Green/Butte and Motherlode mines.
>
> I submit the superfluous information you ask for hoping for all sakes that this isn't a devious deployment of stall tactics, but that your letter does have inherent in it a true desire to help and work with us.

You spoke about several routes existing – I personally know of only one road that accesses the Motherlode properties. It is the shortest, and most expedient, as well as environmentally safe. You could be referring to such roads as the "Wigger upper Road", or possibly old routes that led up to Green-Butte bunkhouse. There could possibly need to be alternative routes because of rockslides etc. **But after your own multi-thousand dollars assessment of the road you should be able to determine this – for yourself!** The route is very obvious.

The routes created last fall cross several areas that appear to wetlands, and cross McCarthy Creek approximately 13 times between McCarthy and the Marvelous Millsite. These routes were not properly constructed to provide drainage or to sustain the impacts of heavy equipment. These considerations compel us to be particularly concerned about the possibility of additional permanent harm to park resources.

As for wetlands, I know if one area only (60 yards) possibly and a few muddy places during the rainy season. Heavy equipment has always been used for almost 100 years continually till present, and there is no evidence of such problems or constructions anywhere on this obvious road for drainage.

Here goes my best shot at meeting your needs in hope that you have this opportunity to listen and act accordingly – And you won't prove yourself to be a "stonewaller" (a stonewaller is in my definition a person who acts in such a deceptive manner that important issues are not acted on, but put off by more and more superfluous and senseless rhetoric, designed to evade the real issues at hand).

The application does not provide sufficient information to allow us to address the request. Please provide the following information: How many trips are planned?

It will take 4 trips of food for animal hay and feed (dogs, horses, goats, chickens) and another 4-5 trips to provide food, building supplies, tools, sawmill, personal emergency need for 17 people; clothing, windows, insulation, roofing materials, bedding and many personal items, such as socks and underwear.

and when will those trips occur? These trips must occur in the 10th and 11th months of 2003.

The application identifies the proposed vehicle(s) as a "bulldozer deadheading (blade generally up) with a trailer and/or tracked vehicles." In order to evaluate the impact of the vehicles we need to know the size and types of equipment contemplated.

Something along the lines of a smaller D-4 dozer would be used with trailer of 16' size estimated – although equipment used and number of trips could vary on conditions and ability.

When would the blade not be up?

Blade would be up except then encountering rock slides which are very few indeed.

Please clarify the meaning of the word "deadheading" in the application.

"Deadheading" means blade up and not used except for emergency application

The application characterizes the request as an emergency request. Please explain the nature of the emergency.

Q. Please explain the nature of emergency!
I will try to explain this in possibly three categories
I. The actual physical needs
II. The unfeasibility of winter travel to supply emergency needs.
III. The "open window" concept so indigenous to Alaska bush living.

I. The Needs:
Our cabin burnt down in the devastating storm that hit the part of Alaska around April of 2003. –35 degree temps rolled down our valley, pushed by winds that exceeded 100 mph. The older family members were out on the trail at the time and "mama country rose" and her smaller children fought the blaze with courage. Upon return of the rest of the family, only tearful eyes and broken awed hearts were found standing among the flame soaked smoldering remnants of all that we had. In the months following an all out effort was put forth to replenish necessary and emergency needs. Gathered below in McCarthy we waited for the perfect moment to bring it home. Deceived by a local ranger "Stevens" – park officials in a sting operation were informed when we could bring the emergency supplies home, and the NPS closed the Motherlode Road to all motorized vehicles for the first time in almost a hundred years – to keep us from personally being able to go home again – just days before our planned departure.

This "sting operation" and "new law" written by the NPS, left us without being able to supply our needs, or rebuild. Now winter in Alaska approaches. Needs grow as winter has demands that must be met.

II. The unfeasibility of winter travel!
1) the possibility of airlifts are not possible due to extreme expense, and the lack of ability to haul fuel, big objects, such as tools, windows, building supplies, etc. – not forgetting snow covered airstrip. Of course, you could offer a helicopter as you've made hundreds of flights up here already – but I wouldn't be able to

accept such a waste of taxpayer's monies when I am perfectly able to provide for myself, if given the opportunity.

2) Winter travel and timing will not provide our extreme emergency needs. You could easily say "If you don't need them before the middle of winter, then you don't need them!"
We cannot wait till then to see! To eat! To sleep! To Build! To Transport! To Feed Animals! OR TO BE WARM!!

3) The biggest reason for our emergency need is because you shut off our access (that is guaranteed) days before we were prepared to meet our own needs last spring. We've run out of everything and we can't wait till the middle of winter to re-supply.

3. Horses, goats, chickens, cats, dogs can't wait till –40 and 3 feet of snow to eat.

4. Machinery – snow machines, horses etc have extreme problems in mid winter during -30 cold and snow.

5. sometimes it doesn't snow, and we can't rely on your timing to come home with supplies.

6. a) In cold weather, foods, varnishes, glues, paints, lacquers, milk, and drink etc are ruined by freezing.
b) What good is building supplies that you can't use! Cement, foundations, etc. are impossible to construct with and use when it is very cold.
c) 50% of the time, rivers break up, causing flood conditions that would soak loads that time of year.

7) Warm ups in the winter often break out ice bridges naturally formed or even break out many that we make by hand.

8) snow machines are unreliable- we have the small Tundra, older models, that need a lot of work mechanical, constantly. They will not be able to bring loads and besides, by the time you could use them IT WILL BE TOO LATE. Many of the snow machine trips were only accomplished with block and tackle – snatch blocks and took many hours to traverse the hills and glaciers.

9) In winter travel is extremely dangerous for these reasons:
A) Avalanches lurk on the valley walls and extreme caution is required – silent and speedy maneuverability is required that a dozer doesn't have.
B) Glaciers form ice hiways on the mountain cliffs that seem to dare your courage, threatening to swallow dozer, horse and wagon, and even snow machine off the side, and made much worse by heavy swinger loads on mountain iced trails with loaded trailers.

10) "Shelf Ice" on the sides of McCarthy Creek represent impossible passage as they form over 10' at times, harder than cement – create drop-offs that challenge even a D-9 dozer.

11) The event of injury to horses, people, and equipment is greatly increased in the winter season. There is no reasonableness in a "law of permitting" one to risk life, injury, and destruction of survival tools.

III. The "Open Window Concept"
Here in Alaska, we who live in the bush-mountain lifestyles know how important timing is for survival – A must that absolutely cannot be ignored! There is an "open window" in the fall during the 10th and 11th month of the year that one can travel to and from homesteads, such as ours, "Hillbilly Heaven".

On the one hand you have frozen and unmuddy ground to travel on. The temperatures are not severe/ you have much ground cover from falling leaves, while grasses are going dormant, the partially frozen ground and colder temp and EASY RIVER PASSAGES due to lack of rain and glacier melt – afford easy and low water passages, which later will swell with false ice dams and flooding.

If any fish were to be proven, they also would be gone absolutely and non-existent. (this is not applicable although almost track-less passage – affording safely, quality soil protection and expediently fast trips would be obtained)

Work and building at the homestead site would also be practical.

While food, clothing, feed, fuel etc would be home WHEN and WHERE you need them.

We've already had to kill two milking goats for lack of feed.

Food is very low, windows are broken by marauding bears, temperatures are dropping, no insulation to the point when my wife and I decided to move our bed to another room last night we found it frozen to the floor.

We ask you to give us access that we can begin to work together.

The Pilgrims

The request indicates that the need is to transfer supplies prior to freeze up. Special Use Permits have been granted in the past for access to inholdings with heavy equipment such

as bulldozers during the winter months when the ground is protected by snow of sufficient depth, generally 6" – 12", or more or a combination of snow and frost depth sufficient to protect the underlying vegetation and soil. Under these conditions the damage that could be done by the equipment is limited. Previous applicants have been able to adapt to the winter schedule for freighting supplies and building materials. Travel over unfrozen ground causes significantly more damage. Travel over unfrozen ground by heavy equipment falls outside of any environmental assessment previously undertaken by the Park and therefore will required a more extensive review under the National Environmental Policy Act, most likely an environmental assessment (EA).

We are also concerned about the issue of the multiple stream crossings needed to travel from McCarthy to the Marvelous Millsite. Recent fisheries inventories lead us to believe that McCarthy Creek may be inhabited by spawning anadromous fish. The presence of an anadromous fishery requires that we consider the stream crossings under the National Environmental Policy Act.

> Q. I would like to receive proof of spawning anadromous fish in McCarthy Creek – and if so, how far up, and where they begin. Historically, it's never had fish, being pure glacier fed and no sighting that can be documented. Not to mention that the stream has been crossed 1,000 of times. In all far and near past – documentation is abundantly available about these as you know.

In addition to our concerns mentioned in this letter please be aware that a permit may be required from the Alaska Department of Fish and Game for a stream crossing, if the stream carries anadromous fish.

We appreciate your efforts to help us understand the needs of your clients in this matter. We will address the request as soon as we have adequate answers to the issues raised above.

Sincerely,

Gary Candelaria
Superintendent
Wrangell-St. Elias NP/P

United States Department of the Interior

NATIONAL PARK SERVICE

Alaska Region
240 West 5th Avenue, Room 114
Anchorage, Alaska 99501

IN REPLY REFER TO:
L7615 (AKSO-RER)

OCT -1 2003

Mr. J.P. Tangen
Attorney at Law
1600 A Street, Suite 310
Anchorage, Alaska 99501-5148

Dear Mr. Tangen:

This is in response to your request during our meeting of September 17, 2003, regarding the Hales' access to the Marvelous Millsite in Wrangell-St. Elias National Park and Preserve. I am providing you additional information on the National Park Service's determination that the Hales' September 14, 2003, access request does not constitute an emergency exempt from the requirements of review under the National Environmental Policy Act (NEPA).

The Hales have requested use of a D-4 bulldozer pulling a 16-foot trailer for eight to nine round-trips between McCarthy and the Marvelous Millsite, along a route the Hales cleared without a permit last fall. The trips are requested in October and November, before the ground freezes, and would entail a total of about 230 crossings of McCarthy Creek, a stream with a native Dolly Varden trout population. Park biologists have documented Dolly Varden spawning habitat and observed spawning-size adults in the stream.

The NEPA implementing regulations at 40 CFR 1506.11 provide for a federal agency action "where emergency circumstances make it necessary to take an action with significant environmental impact without observing the provisions of these regulations." What constitutes an emergency is further defined in Council on Environmental Quality (CEQ), Department of Interior and National Park Service guidance. The Departmental Manual at 516DM 5.8 guidance provides "in the event of an unanticipated emergency situation, a bureau will immediately take any necessary action to prevent or reduce risks to public health or safety or serious resource losses." This provision is further interpreted in the Department's Environmental Statement Memorandum No. ESM97-3, *NEPA Compliance in Emergency Situations*, which adopts the CEQ guidance, CEQ/309 Reference Manual, *Compliance with 40 CFR 1506.11 "Emergencies."* As explained below, the National Park Service has determined that action on Mr. Hale's request does not qualify for an exemption because it is not an emergency as defined in the guidance; and, therefore, this action will remain subject to NEPA review.

The National Park Service understands the challenges the Hales face in choosing to overwinter at this remote area. The circumstances identified in the September 14, 2003, letter, however, do not meet the definitions of an emergency requiring federal action. Examples of emergency actions are also set forth in NPS guidance as "cleanup of immediately threatening hazardous materials spills, fire suppression, and prevention or repair of damage by unanticipated floods or other natural disasters," (NPS DO-12 Handbook) and in CEQ guidance as "the collapsing dam or the species which is almost extinct," (CEQ/309 Reference Manual). Departmental guidance on what constitutes an emergency says that federal action is required "to prevent or reduce risks to public health or safety or serious resources losses," and "particularly if there is a possibility of imminent loss of life, property or resources" (ESM97-3).

We consulted with the NPS Environmental Quality Division in Washington, DC, who concurs with our determination that this situation does not constitute an emergency allowing exemption from the requirements of NEPA.

We remain committed to working with the Hales to provide adequate and feasible access as provided for in ANILCA and its implementing regulations. We have experience in this and other parks in Alaska processing applications for right-of-ways which have resulted in access acceptable to the applicant. We invite the Hales to continue working with us to develop a solution that will provide them adequate and feasible access. Superintendent Candelaria will remain your point of contact and he will be contacting you shortly regarding the Hales' temporary access request. He may be reached at (907) 822-5234.

Sincerely,

Marcia Blaszak
Acting Regional Director

cc:
Cam Toohey, Special Assistant to the Secretary for Alaska
Jake Hoogland, WASO Environmental Quality Division
Chris Bockmon, Office of the Regional Solicitor

United States Department of the Interior

NATIONAL PARK SERVICE

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907 822 5234 Fax 907 822 7216

L3017(WRST-AD)

October 2, 2003

Mr. J.P. Tangen
Attorney at Law
1600 A Street, Suite 310
Anchorage, Alaska 99501

Dear Mr. Tangen:

This letter reiterates the proposal made telephonically to you on September 29, 2003, by Acting Deputy Regional Director Vic Knox, in response to your clients' request for emergency bulldozer access to their property. To date we have received no reply.

Our October 1, 2003, letter to you set forth the reasons why the request does not constitute an emergency allowing an exemption from the requirements of the National Environmental Policy Act (NEPA). Although the circumstances do not fall within an emergency category for NEPA purposes, we appreciate that your clients continue to believe that they have an urgent need for bulldozer access. The current application contemplates use of a D-4 bulldozer pulling a 16-foot trailer for eight to nine round-trips between McCarthy and the Marvelous Millsite. Your clients' hoped to accomplish the nine trips in October or November. Because issuance of the permit to operate the bulldozer requires preparation of an environmental assessment (EA), we are unable to meet that time frame.

We are willing to process your clients' application for temporary access on an expedited basis. We anticipate that such an expedited request would result in a completed EA in approximately nine weeks. This includes about 30 days to prepare the EA, 30 days for required public review, and approximately one week to make a final decision after receipt of public comment.

The EA will analyze your clients' proposal, a required "no action" alternative (non-motorized, air and snowmachine access which do not require permits), and possibly a third alternative that would evaluate a reduced number of trips.

Please let us know if you wish us to begin processing your clients' request for temporary access with the understanding that the timeframe you identified must be extended to accommodate the required environmental assessment. We will not begin work on the EA until you inform us you wish us to proceed. Should you wish us to proceed, please let us know who will be the point of contact to respond to questions that might arise during the environmental assessment process.

The regulations at 43 CFR 36.6 and National Park Service NEPA guidelines allow for recovery of reasonable administrative and other costs related to conducting the NEPA process. We have elected to waive these costs for processing this application for a temporary permit.

Given the proposed route, it is possible a permit would be required from the U.S. Army Corps of Engineers under Section 404 of the Clean Water Act (33 U.S.C. 1344). We recommend the Corps of Engineers be contacted to determine whether a permit is required. We also recommend the Alaska Department of Natural Resources be contacted to determine if they have permit requirements that apply to the proposal.

We look forward to working together to find solutions that work for your clients and that uphold both the access and environmental protection provisions of federal law. Please contact me at 907-822-5234 with any questions on this matter.

Sincerely,

Gary Candelaria
Superintendent

J. P. Tangen

Attorney at Law

1600 A Street, Suite 310
Anchorage, AK 99501-5148

October 21, 2003

Marcia Blaszak
Acting Regional Director
National Park Service
240 West 5th Avenue, Room 114
Anchorage, AK 99501

Gary Candelaria
Superintendent
Wrangell – St. Elias National Park/Preserve
Mile 106.8 Richardson Highway
P O Box 439
Copper Center, AK 99573

Dear Ms. Blaszak and Mr. Candelaria:

Re: The Pilgrim family

This responds to your letters of October 1, 2 and 8, 2003 concerning the Pilgrim family. First, please accept my apologies for the delay in getting back to you. As you know, communication between the family and me has been slow, and that problem has been exacerbated by other recent developments.

When we met together last month, you indicated you did not believe that the application to bring provisions and building materials overland to the Pilgrim family's home across the McCarthy - Green Butte Road before winter conditions foreclosed access constituted an emergency of the sort that would justify expediting the permitting process. In your letter of October 1, 2003, however, you indicated that we should continue to work with you to develop a solution that will provide the family adequate and feasible access.

On September 29, 2003 Deputy Regional Director Knox telephoned me to indicate that the NPS would process the family's application for temporary access on an expedited basis, but that a sixty-seven day window would be required. By that time-table, and allowing for no slippage whatsoever, the decision could not possibly be prepared before the very end of November. Mr. Knox' call was followed up by a letter from Superintendent Candelaria emphasizing the NPS' election to waive the costs of processing the application for a temporary permit. On October 7, 2003 Acting Regional Director Blaszak and I spoke at length exploring ways to meaningfully address the outstanding issues, and that conversation was followed by a letter dated October 8, 2003. I wish to express my appreciation to each of you for your efforts and expressions of concern.

(907) 222-3985 / (fax) (907) 274-6738
jpt@jptangen.com / www.jptangen.com

As you know, in the McCarthy area winter comes early. Already the road is beginning to glaciate. Accordingly, transportation with a tracked vehicle is becoming treacherous. Unless there is a warm snap in the weather, I fear that overland resupply efforts to the Marvelous Millsite, the Spokane Placer and the Motherlode Mine may soon be moot for the winter. When we met, it was pointed out that access by aircraft should be considered. Due to the severe time constraints under which the family was operating, we were forced to take that suggestion very seriously. Although the Pilgrims could not begin to pay for such access out of their own resources, many members of the community stepped forth to contribute their time and resources to lend a helping hand. Predictably, that effort was marred by a plane crash on October 10. I believe you understand the risks that are posed by general aviation in Alaska. We are all very thankful that no one was injured in this incident.

As of late last week forty-four plane trips had been made between the staging area in McCarthy and the landing strip on the Spokane Placer. These forty-four trips have resulted in the transfer of approximately the same amount of supplies and materials that could have been transported in a single cat trip. Extrapolating from that, it is anticipated that approximately 350 more trips by airplane would be required to finalize the provisioning of the family for the winter. Of course, not all of the needed materials and supplies can be transported by light aircraft. For instance, in order to rebuild the residence on the property that was lost to fire last spring, it will be necessary to bring in framed windows; however, they cannot be fitted into a small plane. Likewise, in order to maintain the livestock over the winter the horses, at least, will need a substantial amount of hay. It is completely irrational to contemplate flying hay to the property.

This means that either the family must construct a building to live in that lacks windows and winter the horses in McCarthy or that some alternative be found. The purpose of this letter is to propose an alternative. I infer from your correspondence and other statements that the major concern with cat access is the impact on resident populations of dolly varden associated with the proposed stream crossings. Accordingly, it would appear that if the number of trips in to the property were substantially reduced, there would be a concomitantly reduced impact on the fish. That being the case, you should be able to formulate a finding of no significant impact with the information you already have in hand.

What is requested is a permit for two, or perhaps three, cat and trailer trips when the weather allows, the balance of the previously submitted SF 299 as amended on September 14, 2003 would remain the same. You have not identified any other problems with that application to date. I would further propose that a member of the Park staff accompany the driver on each trip to ensure that the appropriate path is followed and that the impact on the Park's resources is minimized.

Obviously, we would like to haul as much material overland as possible to reduce the number of flights and the associated risks to the volunteers; however, time does not permit awaiting extensive NEPA compliance. Once the window is closed by weather, in our opinion there will be no further opportunity to transport substantial quantities of material overland until after break-up.

With regard to the question of sitting together with a facilitator to discuss the issues, I am of the view that doing so would not be cost effective. Papa Pilgrim is afflicted with diabetes and has trouble walking so travel for him is difficult. He has been very focused on lining up provisions for his family. For him to travel to a mutually convenient location for another meeting, especially one that is not likely to result in a permit to travel back and forth to his home, constitutes a significant hardship. Without wishing to be negative, I believe we need to hold that idea in reserve for another day.

Finally, it is noted that the NPS kindly offered its assistance when the details of the October 10, 2003 plane crash became known. Certainly assistance is needed in this regard. I have spoken with Superintendent Candelaria, and he has indicated that the Region has taken the position that it will not ferry the wreckage off the landingstrip. This is an unhappy decision because, at least in our minds, the airlift was suggested if not required by the NPS. Knowing full well what was involved, you urged us to pursue that course. It would seem reasonable that you ought to assume responsibility for the foreseeable consequences. To that end, I respectfully request this negative decision be reconsidered.

Once again, I thank you for your concerns. I believe you have a clear understanding of our needs. We look forward to a swift and successful resolution of our differences.

Sincerely,

J. P. Tangen
ABA #7507071
Attorney for the Pilgrim family

cc: The Pilgrim Family
Drue Pearce
Cam Toohey

United States Department of the Interior
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L7617 (WRST-S)

October 29, 2003

Mr. J.P. Tangen
Attorney at Law
1600 A Street, Suite 310
Anchorage, AK 99501-5148

Dear Mr. Tangen:

This letter is in response to your letter of October 21, 2003, regarding the Hale application for temporary access to their property within Wrangell-St. Elias National Park and Preserve. Your client has requested use of a D-4 caterpillar tractor to access their property on McCarthy Creek in October and November, 2003. In previous correspondence, we informed you that the application required an environmental assessment pursuant to the National Environmental Policy Act (NEPA) and that the circumstances presented were not an emergency as contemplated by 40 CFR 1506.11. We also offered to expedite the process.

The National Park Service is prepared to begin the environmental analysis as soon as you inform us that you wish us to proceed. As stated previously, the EA will take approximately nine weeks to prepare. Consequently, we cannot accommodate the timeframe identified in the application. We reiterate our offer to expedite the environmental assessment.

You suggest that fewer trips would reduce the amount of time necessary to produce the environmental assessment. However, the timeframe we previously indicated is essentially the minimum needed to complete the environmental analysis.

If you decide to proceed with the environmental assessment, we would appreciate your client's response to the enclosed list of assumptions. These assumptions would be the basis for the environmental assessment. Any permit we issue would contain a condition that your client have applicable permits required by other agencies. In particular, this action may be subject to review under Section 404 of the Clean Water Act and could require a U.S. Army Corps of Engineers Permit, and it may require authorization from the State Department of Natural Resources for anadromous stream crossings.

Regarding your request that the NPS ferry the disabled aircraft off the Spokane Placer airstrip, our previous decision on this matter is unchanged. Our offer of assistance was directed to any immediate emergency medical needs of those involved. NPS did not suggest or require use of a particular pilot or plane. The decisions regarding flying were those of the pilot and the airstrip condition those of the landowner. NPS does not assume any responsibility for those decisions. We, like you, are thankful that no one was seriously injured.

We would welcome the opportunity to discuss the application with you or your client at your convenience. We appreciate your suggestions and look forward to working with you.

Sincerely,

Gary Candelaria
Superintendent

MCCARTHY CREEK TEMPORARY ACCESS ENVIRONMENTAL ASSESSMENTS
Assumptions for Analysis
October 28, 2003

Based on the applicants' SF299 application and subsequent letters, the following assumptions will used for analysis in the environmental assessment. Please contact the NPS immediately if these assumptions are incorrect.

1. The applicants request a temporary access permit for a maximum of three round trips between McCarthy and the Marvelous Millsite using a D-4 caterpillar bulldozer and a 16-foot long trailer on wheels.

2. The temporary access permit is needed for personal purposes only.

3. The proposed route alignments are shown on the attached map.

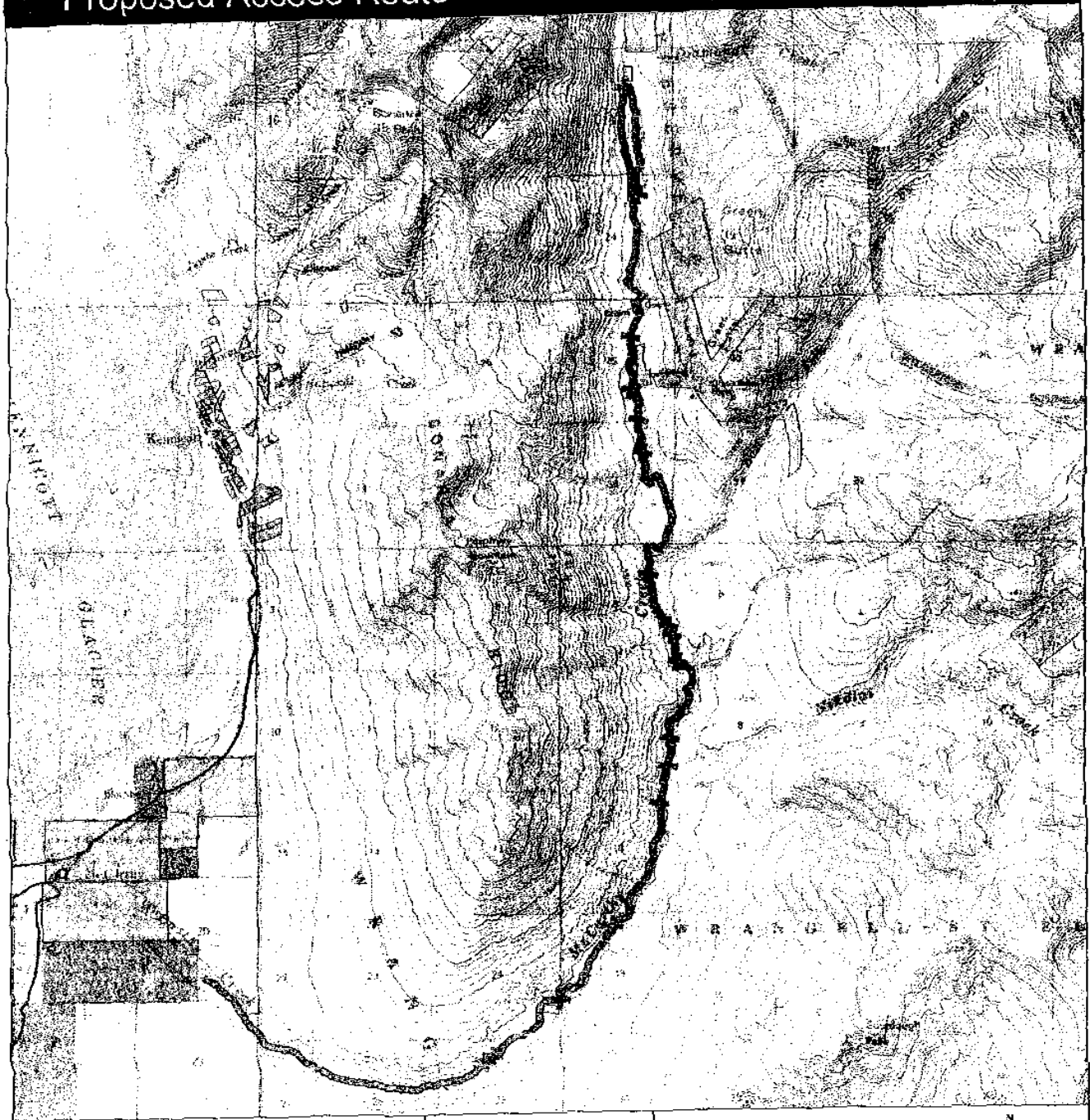
4. The bulldozer will blade the two sections of the route where material has slumped onto the bladed track: near upper tunnel bypass and along the river bank approximately 1 mile south of Marvelous Millsite. These are the only two sections of the route where bulldozer blading will occur.

5. Materials to be transported include food for the family, animal feed, clothing and other personal items, and building supplies (windows, insulation, tools, sawmill, cement, foundation and roofing materials, glues, varnishes, paints, and lacquers).

6. Propane and diesel are the only fuels that will be transported.

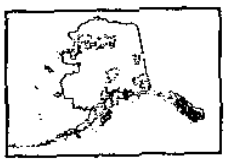
7. Transportation of any hazardous materials will be in compliance with 40 CFR Part 302.

McCarthy Creek
Proposed Access Route



Legend

- Proposed Access Route
- Stream Crossings
- STATE OF ALASKA, DOT
- UNIVERSITY OF ALASKA
- Private Lands



National Park Service
Alaska Support Office
GIS Team

N W E S

0 0.5 1 2 Miles

United States Department of the Interior
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L7617 (WRST-S)

November 24, 2003

Mr. J.P. Tangen
Attorney at Law
1600 A Street, Suite 310
Anchorage, AK 99501-5148

Dear Mr. Tangen:

This letter is to reiterate the offer we made to process your clients' temporary access permit and to expedite the environmental assessment in our letter of October 29, 2003. I phoned your office and left you a voice mail on Wednesday morning, November 19, 2003, with the same information. As previously stated, the EA will take approximately nine weeks to prepare. Consequently, we cannot accommodate the timeframe identified in the application. A response to the list of assumptions attached to the October 29 letter is needed. We are available to discuss the EA process with you or your clients at your convenience.

Your clients' original SF 299 states that "the application covers only immediate needs. An application for permanent access requirements will be submitted at a later date." If this is still their intent, we encourage your clients to begin the application process as soon as possible. A long term access request could require additional analysis under the National Environmental Policy Act which will take time to complete.

Sincerely,

Gary Candelaria
Superintendent

J. P. Tangen

Attorney at Law

1600 A Street, Suite 310
Anchorage, AK 99501-5148

December 16, 2003

VIA FAX (907) 822-7216

Mr. Gary Candelaria
Superintendent
United States Dept. of the Interior
National Park Service
Wrangell-St. Elias National Park/Preserve
Mile 106.8 Richardson Hwy, P.O. Box 439
Copper Center, AK 99573

Dear Mr. Candelaria:

Re: Application for permit to use tracked vehicle on Greene Butte – McCarthy Road

This is in response to your letter of November 24, 2003. Thank you for your continuing efforts to bring this controversy to an amicable resolution. I understood from your phone message, apparently mistakenly, that you were going to call again; therefore, I put the matter off somewhat. Subsequently, I was out of state from Thanksgiving through the first week of December when your letter arrived. I have, however, now visited with the family with regard to this issue and wanted to respond to your letter and telephone call.

While we in no way concede that the NPS interpretation of the Section 1110(b) of ANILCA can be defended ("*Notwithstanding any other provision of ... law the Secretary shall* ...."), we recognize that you are trapped by the regulations with which you are confronted. It has never been our objective to make your life more difficult. However, now that the window of opportunity for accessing the property on a reliable basis has probably passed, I believe the response to your letter must call for more fluidity than was previously necessary.

You have specifically requested comments on the list of assumptions set forth in your October 29, 2003 letter. Assumptions 2, 3 and 7 are fine.

Assumption 1 needs to be modified in a couple of ways. First, the application was for nine round trips, not three. You will recall that a lesser number was proposed by way of a compromise to get you off the NEPA hook; however, since that could not be worked out, and since airlifting supplies into the property is no longer reasonably possible, it is appropriate to revert to the originally proposed nine trips. Second, as recently as last week, Walt Wigger verbally gave his D5 to the Pilgrims, therefore, that would be the vehicle of choice. I am not at all certain why one vehicle or another makes much difference, however, if there is a need to make a further modification, we will let you know. (Hopefully, every modification will not precipitate a nine-week waiting period.) Finally, the trailer of choice should be dictated by conditions. For instance, a wheeled trailer probably will not make much sense if there is snow

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cover, as is apparently the case at present. I would urge you to eliminate that specific from the assumptions, if possible. I would also suggest specifying the length for the trailer as "approximately" 16-foot. After all, I don't think anyone wants to have your rangers out there with a tape measure dinging the family for being an inch or two over or under.

I suggest that we build some flexibility into assumption 4 discussing the use of the cat's blade. As you know, this valley is a dynamic area, and it may prove reasonable to do small modifications of either earth or snow in other locations. The need for blading is to make the road passable, not to destroy the countryside. Even you must concede that where the blade has been used in the past, the work was done in a reasonable, modest and appropriate fashion. This, of course, was the reason why we have suggested that a ranger accompany the family in and out, at least once, so that there might be general agreement on what is appropriate.

Assumptions 5 and 6, generally are agreeable, except there is a reasonable likelihood that gasoline will also be needed in small amounts to refuel snowmobiles and to operate chain saws and other similar kinds of equipment.

With regard to assumption 7, I believe it is fair to say that Pilgrim will not be sneaking reportable quantities of the hazardous substances identified in 40 CFR 302.4 into his cabin.

I hope the foregoing information is helpful to you. If you have any questions, please don't hesitate to contact me. I will try to be more diligent in getting back to you in the future. Now that winter is upon us and the effort to try to beat the weather has reached a form of equipoise, it should be easier to attend to your inquiries. I believe a more comprehensive application for permanent access will be forthcoming soon after the holidays, when schedules can be more easily accommodated.

I note that you continue to rattle the saber concerning alleged damage to Park resources that may have been incurred last spring. What is the status of that inquiry? Has a report been prepared? If so, may be have a copy of it?

Sincerely,

J. P. Tanger
ABA #750051

Cc: Pilgrim family

APPENDIX B – ANILCA SUBSISTENCE 810 EVALUATION

APPENDIX B – ANILCA SECTION 810 SUMMARY EVALUATION AND FINDINGS

I. INTRODUCTION

This analysis was prepared to comply with Title VIII, Section 810 of the Alaska National Interest Lands Conservation Act (ANILCA). It summarizes the evaluation of potential restrictions to subsistence activities that could result from the National Park Service (NPS) issuing a special use permit to allow the applicants temporary access to two inholdings on McCarthy Creek in the Wrangell-Saint Elias National Preserve via a 14-mile bladed alignment between the town of McCarthy and their inholdings at Marvelous Millsite (USMS 1082-B) and the Spokane Placer (USMS 875). Approximately 12.5 miles of the proposed alignment crosses federal public lands. (See EA Maps 1 and 2 for general project location and access alignment.) The applicants wish to transfer food, fuel, building materials, and other supplies to the inholdings using a bulldozer towing a trailer.

II. THE EVALUATION PROCESS

Section 810(a) of ANILCA states:

"In determining whether to withdraw, reserve, lease, or otherwise permit the use, occupancy, or disposition of public lands … the head of the federal agency … over such lands … shall evaluate the effect of such use, occupancy, or disposition on subsistence uses and needs, the availability of other lands for the purposes sought to be achieved, and other alternatives which would reduce or eliminate the use, occupancy, or disposition of public lands needed for subsistence purposes. No such withdrawal, reservation, lease, permit, or other use, occupancy or disposition of such lands which would significantly restrict subsistence uses shall be effected until the head of such Federal agency -

(1) gives notice to the appropriate State agency and the appropriate local committees and regional councils established pursuant to section 805;

(2) gives notice of, and holds, a hearing in the vicinity of the area involved; and

(3) determines that (A) such a significant restriction of subsistence uses is necessary, consistent with sound management principles for the utilization of the public lands, (B) the proposed activity will involve the minimal amount of public lands necessary to accomplish the purposes of such use, occupancy, or other disposition, and (C) reasonable steps will be taken to minimize adverse impacts upon subsistence uses and resources resulting from such actions."

ANILCA created new units and additions to existing units of the national park system in Alaska. Wrangell-Saint Elias National Park, containing approximately eight million one hundred and forty-seven thousand acres of public lands, and Wrangell-Saint Elias National Preserve containing approximately four million one hundred and seventeen thousand acres of public lands, was created by ANILCA, section 201(9), for the following purposes:

> "To maintain unimpaired the scenic beauty and quality of high mountain peaks, foothills, glacial systems, lakes, and streams, valleys, and coastal landscapes in

> their natural state; to protect habitat for, and populations of, fish and wildlife including but not limited to caribou, brown/grizzly bears, Dall sheep, moose, wolves, trumpeter swans and other waterfowl, and marine mammals; and to provide continued opportunities including reasonable access for mountain climbing, mountaineering, and other wilderness recreational activities. Subsistence uses by local residents shall be permitted in the park, where such uses are traditional, in accordance with the provisions of Title VIII."

The potential for significant restriction must be evaluated for the proposed action's effect upon "…subsistence uses and needs, the availability of other lands for the purposes sought to be achieved and other alternatives which would reduce or eliminate the use."

III. PROPOSED ACTION ON FEDERAL LANDS

The National Park Service is considering three alternatives in response to the applicants' request for temporary access to their inholdings on McCarthy Creek in Wrangell-St. Elias National Preserve. The applicants wish to transfer food, fuel, building materials, and other supplies for personal use to their inholdings using a bulldozer towing a trailer. The proposed alignment would follow an approximately 14-mile bladed alignment between the town of McCarthy and their inholdings at Marvelous Millsite (USMS 1082-B) and the Spokane Placer (USMS 875). Approximately 12.5 miles of the proposed alignment crosses federal public lands. The primary alignment also crosses private property in three places; travel across non-federal lands is beyond the scope of this analysis. A full discussion of the alternatives and their anticipated effects is presented in the EA. The alternatives are summarized briefly below with particular attention to subsistence resources.

Alternative A – No-Action Alternative: The NPS would not issue a special use permit for temporary access using a bulldozer and trailer to transport supplies to the applicants' two inholdings on McCarthy Creek. The applicants would continue to access their inholdings on McCarthy Creek by snowmachine (during periods of adequate snow cover), airplanes, and non-motorized surface transportation methods – all methods allowed under ANILCA 1110 (a) with no authorization from the NPS. The applicants have successfully used the following means to travel between McCarthy and their inholdings, to transport supplies to the inholdings, or both during 2002 and 2003: snowmachines and tow-behind sleds (winter 2002-03), fixed-wing aircraft landing on an existing airstrip on the Spokane Placer property (summer and fall 2003), and up to nine horses (spring, summer, and fall 2003).

Alternative B – Applicants' Proposal: The NPS would issue a special use permit for temporary access to the applicants' two inholdings on McCarthy Creek under the conditions described by the applicants' SF-299 form and subsequent correspondence (see Appendix A for complete details). Travel would occur in October, November, or during frozen conditions. The proposed alignment would follow a 14-mile bladed alignment between the town of McCarthy and the applicants' inholdings at Marvelous Millsite and the Spokane Placer. Approximately 12.5 miles of the proposed alignment crosses federal public lands, and the primary alignment also crosses private property in four places. If the applicants do not receive permission to cross these private lands, a bypass around the properties at 5 Mile (US 6081) and Green Butte Millsite using the barren floodplain or an existing alternate alignment, respectively, could be used (see Map 7). A bypass around the Big Ben Millsite property using the frozen McCarthy Creek corridor in the winter also is possible. Park staff would accompany the applicants along the alignment to monitor permit compliance. Two sections along the way, where material has slumped onto the alignment,

would likely be bladed, and other sections may be bladed if the NPS employee agrees with the operator's suggestion or identifies a need to reestablish a level surface for the bulldozer, and assuming the sections have a durable coarse substrate.

The special use permit would be valid for up to one year from the date it is issued. A maximum of nine round trips (18 one-way passes), would be authorized between McCarthy and the applicants' inholding using a D-5 caterpillar or smaller bulldozer (or other comparable methods of transportation), and an approximately16-foot long trailer on wheels or skids (runners) depending on snow cover and ground conditions. Based on the alignment and the number of trips, an estimated 300 crossings of McCarthy Creek and major tributaries would be necessary during travel. Materials transported would include food, animal feed, clothing and other personal items, fuels, and building supplies. Hazardous materials transported would include gasoline, propane, diesel, adhesives, and paint products.

Alternative C – Frozen Ground and Mostly Frozen Water Access (NPS Preferred): The NPS would issue a special use permit for temporary access to the applicants' two inholdings on McCarthy Creek. The permit would include a number of terms and conditions to protect the preserve's resources and values (see Appendix C). Travel would be authorized from the date the permit is issued to April 15, 2004, and from October 20, 2004, to either April 15, 2005, or the expiration date of the permit (whichever comes first), subject to the following conditions: ground frozen to a minimum depth of 12 inches, sufficient snow cover to protect vegetation (typically 6 inches or more of snow), and stream crossings using ice or snow bridges strong enough to support permitted vehicles. Open water crossings require advance approval by the Superintendent or designee.

There would also be provisions for fuel containment, spill prevention, and cleanup. The purpose of access, type of heavy equipment used (i.e., bulldozer and trailer, or other comparable methods of transportation), and materials transported would be the same as described under Alternative B (Applicants' Proposal). The access alignment would be largely similar to that described under Alternative B, except for adjustments to protect natural resources (e.g., to avoid the Cutbank area about one mile south of Marvelous Millsite). As under Alternative B, park staff would accompany the applicants along the alignment to monitor permit compliance.

IV. AFFECTED ENVIRONMENT

A summary of the affected environment pertinent to subsistence use is presented here. The following documents contain additional descriptions of subsistence uses within Wrangell-St. Elias National Park and Preserve:

General Management Plan/Land Protection Plan, Wrangell-St. Elias National Park and Preserve, NPS Alaska Region, 1986.

Final Environmental Impact Statement, Wilderness Recommendation, NPS Alaska Region, 1988.

Wrangell-St. Elias Subsistence Management Plan, NPS Alaska Region, 1998.

Subsistence uses are allowed within Wrangell-St. Elias National Park and Preserve in accordance with Titles II and VIII of ANILCA. The national preserve is open to both federal subsistence uses and state authorized general (sport) hunting, trapping and fishing activities. Qualified local rural residents who live in one of the park's twenty-three designated resident zone communities or

have a special subsistence use permit issued by the park superintendent may engage in subsistence activities within the national park. State regulated sport fishing is also allowed in the national park. The proposed action falls within the preserve.

The landscape included within Wrangell-St. Elias National Park and Preserve ranges from forests and tundra to the rock and ice of high mountains. The region's main subsistence resources are salmon, moose, caribou, Dall sheep, mountain goat, ptarmigan, grouse, snowshoe hare, furbearing animals, berries, mushrooms, and dead and green logs for construction and firewood. McCarthy Creek drainage is an area where local rural residents could hunt for wildlife such as moose, brown bear, black bear, goat, Dall sheep, ptarmigan and grouse. Trapping for furbearers also occurs. Currently McCarthy Creek is not a significant area for subsistence fishing, however it does support populations of Dolly Varden, and historic records indicate some fishing activity. Federally qualified subsistence users for the area have a customary and traditional use determination for freshwater fish populations in this creek. Vegetation within the area of the proposed access alignment ranges from floodplain terrances sparcely vegitated with dryas, forbs and low willow to terraces with young forests to wetlands with black spruce, low willow, moss, and forbs to high brush and open white spruce forest. The forest understory includes alder, willow, high bush cranberry, soapberry and forbs. Except for small amounts of harvest of dead and downed trees for firewood, there is little to no subsistence use of vegetative material. Plant resources of potential interest to subsistence users include cloudberries and high bush cranberries.

The NPS recognizes that patterns of subsistence use vary from time to time and from place to place depending on the availability of wildlife and other renewable natural resources. A subsistence harvest in a given year may vary considerable from previous years due to weather conditions, migration patterns, and natural population cycles.

V. SUBSISTENCE USES AND NEEDS EVALUATION

To determine the potential impact on existing subsistence activities, three evaluation criteria were analyzed relative to existing subsistence resources that could be impacted.

The evaluation criteria are as follows:

1. the potential to reduce important subsistence fish and wildlife populations by (a) reductions in numbers; (b) redistribution of subsistence resources; or (c) habitat losses;

2. the effect the action might have on subsistence fisher or hunter access;

3. the potential for the action to increase fisher or hunter competition for subsistence resources.

<u>The potential to reduce populations:</u>

Subsistence species and habitats would be subjected to some potential impacts and disturbances as a result of the proposed actions. The requested access may cause the temporary disturbance and displacement of wildlife resources and could result in minor habitat losses; however, this is not expected to result in long-term wildlife population declines. Thus, the proposed alternatives are not expected to significantly alter wildlife movements or reduce populations of important subsistence wildlife or plant resources. Alternative B has the potential to lead to a reduction in fish numbers; however, McCarthy Creek is not known to have a significant subsistence fishery.

Beyond this, NPS regulations and provisions of ANILCA provide the tools for adequate protection of fish and wildlife populations on federal public lands while ensuring a subsistence priority for local rural residents. NPS regulations allow the superintendent to enact closures, restrictions, or both if necessary to protect subsistence opportunities and ensure the continued viability of particular fish or wildlife populations.

The effect on subsistence access:

Access for subsistence use on NPS lands is provided by section 811 of ANILCA. Any improvements along the proposed access alignment, such as the blading proposed under Alternatives B and C, could slightly improve access to the McCarthy Creek drainage for sport as well as subsistence uses and users.

The potential to increase competition:

Changes in the alignment could facilitate additional sport as well as subsistence hunting activity in the McCarthy Creek drainage. Such increased activity could result in increased competition for a limited pool of wildlife. Competition for wildlife or other resources is not expected to significantly impact subsistence users as a result of the requested temporary access, however. National Park Service regulations and ANILCA provisions mandate that if and when it is necessary to restrict taking of fish or wildlife, subsistence users are the priority consumptive users on federal public lands and would be given preference over other consumptive uses (ANILCA, section 802(2)). Continued implementation of the ANILCA provisions should mitigate any increased competition from resource users other than subsistence users. Therefore, the proposed action is not expected to adversely affect resource competition.

VI. AVAILABILITY OF OTHER LANDS

Except for minor alignment variations, no other lands would satisfy the request for temporary access to the applicants' inholdings on McCarthy Creek. There are, however, other federal public lands within and outside of the park and preserve that are available for subsistence.

VII. ALTERNATIVES CONSIDERED

The EA and this evaluation have described and analyzed the proposed alternatives. The proposed actions are consistent with NPS mandates and the General Management Plan for the park and preserve.

Modifying Alternative B to provide for a bypass around private property at Big Ben Millsite via an abandoned alignment referred to as the "Wigger Route" was considered but eliminated from further consideration. Such a bypass would require new construction through previously undisturbed vegetation as well as reconstruction of an old, overgrown alignment. These activities are not compatible with the scope of a temporary access request.

No other alternatives that would reduce or eliminate the use of public lands needed for subsistence purposes were identified. It is possible for subsistence users to utilize other lands inside and outside the park and preserve. Subsistence users extend their activities to other areas as necessary.

VIII. FINDINGS

This analysis concludes that the proposed action, including all proposed alternatives, will not result in a significant restriction of subsistence uses.

APPENDIX C – TERMS AND CONDITIONS FOR ALTERNATIVE C

APPENDIX C – TERMS AND CONDITIONS FOR ALTERNATIVE C (NPS PREFERRED)

The access alignment is shown and described by the attached maps and text description. Terms and conditions applicable to access along this alignment are described below.

GENERAL:

1. A D-5 caterpillar or smaller bulldozer pulling a trailer is the only vehicle authorized by this permit. Prior approval by the Superintendent is required if the applicant wants to substitute a comparable vehicle. This permit does not affect Applicants use of snowmachines (during periods of adequate snow cover), fixed wing aircraft, horse or foot for access.

2. Travel pursuant to this permit is authorized from the date of permit issuance to April 15, 2004; and from October 20, 2004 until either April 15, 2005 or the expiration of the permit (whichever comes first). Travel during the above identified periods is further conditioned upon the ground being frozen to a minimum depth of 12 inches and the existence of snow cover sufficient to protect the resources (typically more than 6 inches of snow. Stream crossings will utilize ice or snow bridges (these bridges must be strong enough to support permitted vehicles). Open water crossings require advance approval by the Superintendent or designee.

3. Before commencing access, the permittee will obtain all necessary State of Alaska permits and Federal permits. This permit does not authorize travel across private land. Applicant is responsible for securing permission to cross private land.

4. The Permittee shall notify the Superintendent 48 hours prior to the start of each trip.

5. A maximum of 18 one way trips by bulldozer, with or without a trailer, is permitted

6. The permittee and the NPS will jointly conduct a reconnaissance along the proposed alignment to identify and determine how to avoid problem areas before a bulldozer is moved across the selected alignment. The Superintendent or his/her designees may accompany the permittee on any or all trips to insure permit compliance and direct alignment selection."

7. The permittee is responsible for ensuring that all employees, party members, operators, and any other persons working for or with the permittee comply with the permit.

8. The bulldozer will travel with the blade up except as necessary to build snow bridges at sites approved by the Superintendent. In addition two sections of the alignment, where material has slumped onto it, would likely need to be bladed again: 1) near the upper tunnel bypass and 2) along the river bank approximately one mile south of Marvelous Millsite. At the upper tunnel bypass, blading of soils would be within the existing disturbance, including side-cast. Other short sections of previously bladed side slopes or slopes with recent cut and fill may be bladed with advance approval by the Superintendent.

9. Standing live trees with a diameter breast height (DBH) greater than 3 inches shall not be cut or cleared without advance approval by the Superintendent. No trees, regardless of size, within 300 feet of a water body may be cut or cleared without advance approval by the Superintendent.

10. The use of motorized vehicles to push, blade, or drag trees is not allowed. Removal of downed trees shall be by cutting the trees into lengths and placing them by hand lengthwise and parallel to the alignment.

11. Bulldozer operators will not execute tight turns by locking one track.

12. Debris, food and refuse generated by the permittee and/or his employees and coworkers will be removed from the preserve and disposed of in accordance with State and Federal law.

13. Any equipment, which becomes stuck or breaks down during access, will be reported as soon as possible to the Superintendent or his/her designees. Equipment must be removed or stabilized in consultation with the NPS.

Cultural Resources

14. All cultural resources will be avoided. Examples of this resource within the area of potential effect are mining camps, road construction camps, isolated cabins, tunnels, remains of bridge abutments, and associated features and artifacts. The permittee shall not injure, alter, destroy, or collect any site, structure, or object.

15. If a cultural resource is inadvertently impacted by the permitted activities, the permittee shall cease the activity, protect the resource, and notify the Superintendent immediately.

Water Resources

16. A snow ramp or ice bridge must be constructed only of snow and water, and must be free of soil and organic debris; it must be constructed to go out with natural ice breakup, or it must be breached before breakup to protect downstream structures, water quality, and fish habitat. If water is pumped from the creek to make an ice bridge, the intake of the pump hose should be screened to protect fish and their eggs.

17. The permittee will avoid impeding the passage of fish, disrupt fish spawning, adversely affecting over-wintering or nursery areas identified by the Superintendent or his/her designees. The permittee shall not permanently block off or change the character or course of any stream.

Fuel Transportation

18. No refueling of the bulldozer or fuel storage is permitted on preserve lands.

19. Fuel containers larger than 5 gallons in size must be transported within sealed over-pack drums of plastic or steel. Absorbent pads must be kept on the bulldozer while traveling within the park unit.

20. All spills of oil, petroleum products, and hazardous substances shall be reported to the Alaska Department of Environmental Conservation (ADEC) in accordance with Alaska law. Immediate actions will be taken to confine the spill to the smallest area. Discharge notification and reporting requirements from AS 46.03.755 and 18 AAC 75 Article 3 will be attached to the permit and are to be followed by the applicant.

APPENDIX D – ASSUMPTIONS ABOUT ACCESS ALIGNMENTS AND BYPASSES

APPENDIX D – ASSUMPTIONS ABOUT ACCESS ALIGNMENTS AND BYPASSES

Proposed Primary Alignment

- Commences on NPS lands approximately 1 mile upstream from McCarthy town center and continues to Spokane Placer
- Crosses and/or enters upon Non-federal lands at 4 places
  - University of Alaska Subdivision ROW
  - USS 6081 (5-mile)
  - Green Butte Millsite
  - Big Ben Millsite
- The proposed primary alignment runs about 14 miles from the town of McCarthy to the applicants' inholdings at Marvelous Millsite (USMS 1082-B) and the Spokane Placer (USMS 875), with about 12.5 miles on preserve lands.
- The alignment was most recently traversed and/or bladed during the Fall/winter of 2002/3.
- Parallel alignments were bladed and traveled along some sections
- The main alignment disturbance width ranges from 8 to more than 30 feet and consists of bladed, trammeled and compressed sections as well as spoil piles adjacent to the tracked portion.
- Substrate exposed within the alignment is a mosaic of gravel/sand/rock, mineral soil and rock, mineral soil, mineral and organic soils, mineral soil and moss, organic soil with litter, and plants.
- Bulldozer channel crossings were utilized at 17 places along McCarthy Creek within federal lands, and also at one location near McCarthy downstream of where the alignment first enters preserve lands
- There are also stream channel crossings on East Fork and Nikolai Creeks as well as numerous small seeps and side drainages.
- Generally the main alignment traverses flat and very low gradient terrain.
- Locally the grade of alignment is estimated to be between 10 and 20 percent within valley side slope sections.
- The main alignment was constructed by cut and fill across side slopes up to 70 percent.
- Alignment within the uplands is locally rutted and entrenched.

<u>Estimates for the proposed alignment terrains based upon assumed widths</u>:

Terrain type	Length Miles	Percent Distance	Acreage 8-ft width (acres)	Acreage 12-ft width (acres)	Acreage 16-ft width (acres)
Barren Floodplain	1.4	12	1.4	2.0	2.7
Vegetated Floodplain	0.8	6	0.8	1.1	1.5
Valley Side Slopes	0.9	7	0.9	1.3	1.8
Terraces	7.8	63	7.7	11.5	15.4
Uplands	1.5	12	1.4	2.1	2.9
Totals	**12.4**	**100**	**12.4**	**18.2**	**24.3**

Includes:

- Approximately 300 linear feet in side slope terrain of cut bank adjacent to active stream channel

- Approximately 2000 linear feet within the terrace terrain which is affected by the landslide deposition zone
- A minimum of 10 -20 locations along the alignment where water issuing from seeps or flowing in small side drainages crosses the alignment
- The 19 stream channel crossings are situated within the barren floodplain terrain

Alternate Existing Alignments

General Eastside Alignment Description, estimated lengths:
- One stream channel crossing
- Approximately 1700 feet barren floodplain
- Approximately 2600 feet vegetated floodplain
- Approximately 1100 feet terrace

General Green Butte Millsite Alignment, Description, estimated lengths
- Two stream channel crossings
- Approximately 1400 feet barren and vegetated floodplain

Bypasses Involving passage over frozen and snow covered ground

General US 6081 (5-Mile) Bypass Description, estimate lengths
Approximately 500 feet barren floodplain

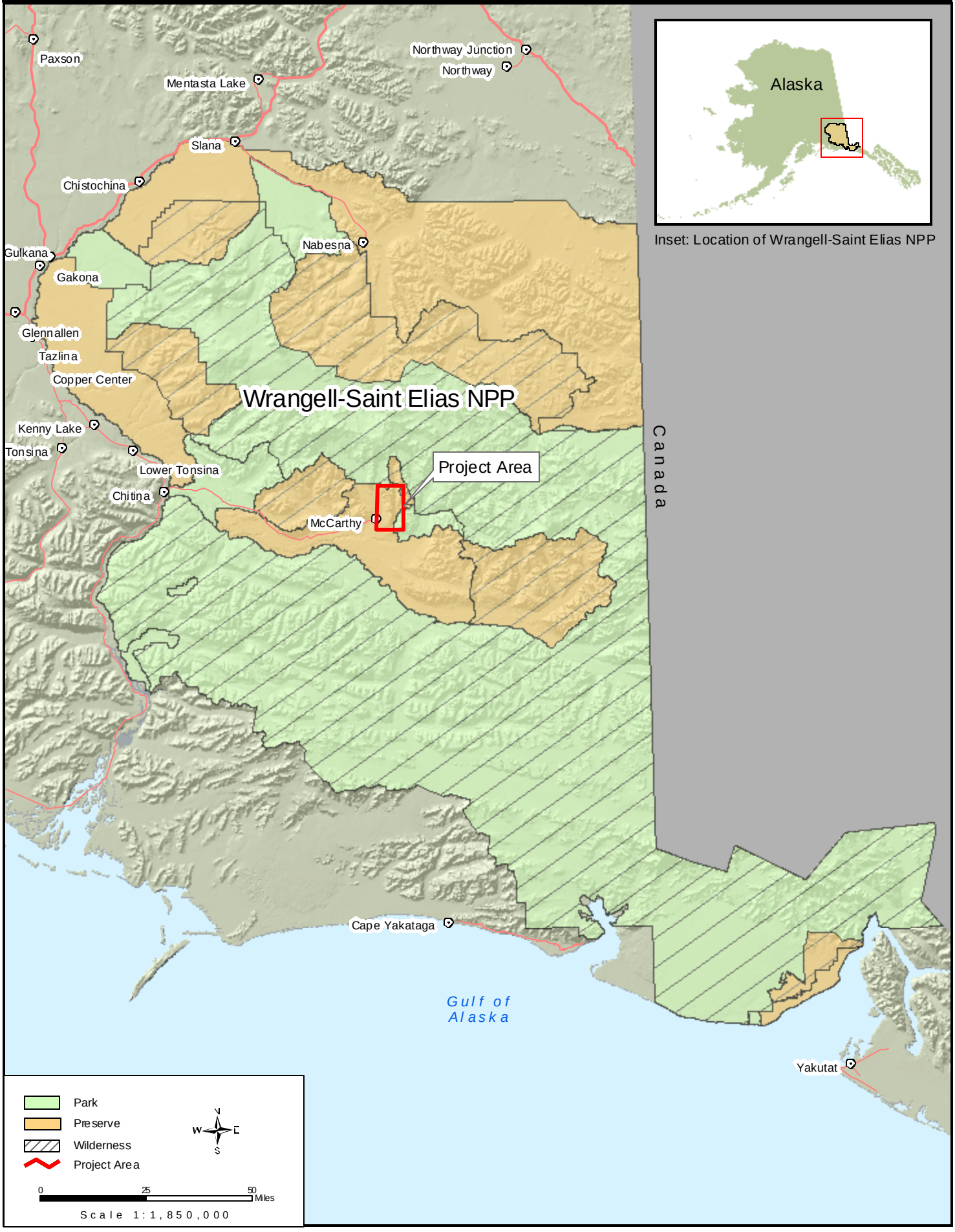
General Big Ben Millsite Bypass – Stream Corridor estimated lengths
Approximately 2000 feet of active stream channel with floodplain
Approximately 500 feet of side tributary floodplain at a 10 percent slope

Mention by the U.S. Department of the Interior National Park Service of trade names or commercial products does not constitute endorsement or recommendation for use of those products.

As the nation's principal conservation agency, the Department of the Interior has responsibility for most of our nationally owned public lands and natural and cultural resources. This includes fostering the wisest use of our land and water resources, protecting our fish and wildlife, preserving the environmental and cultural values of our national parks and historical places, and providing for enjoyment of life through outdoor recreation. The department assesses our energy and mineral resources and works to assure that their development is in the best interests of all. The department also has a major responsibility for American Indian reservation communities and for people who live in island territories under U.S. administration.

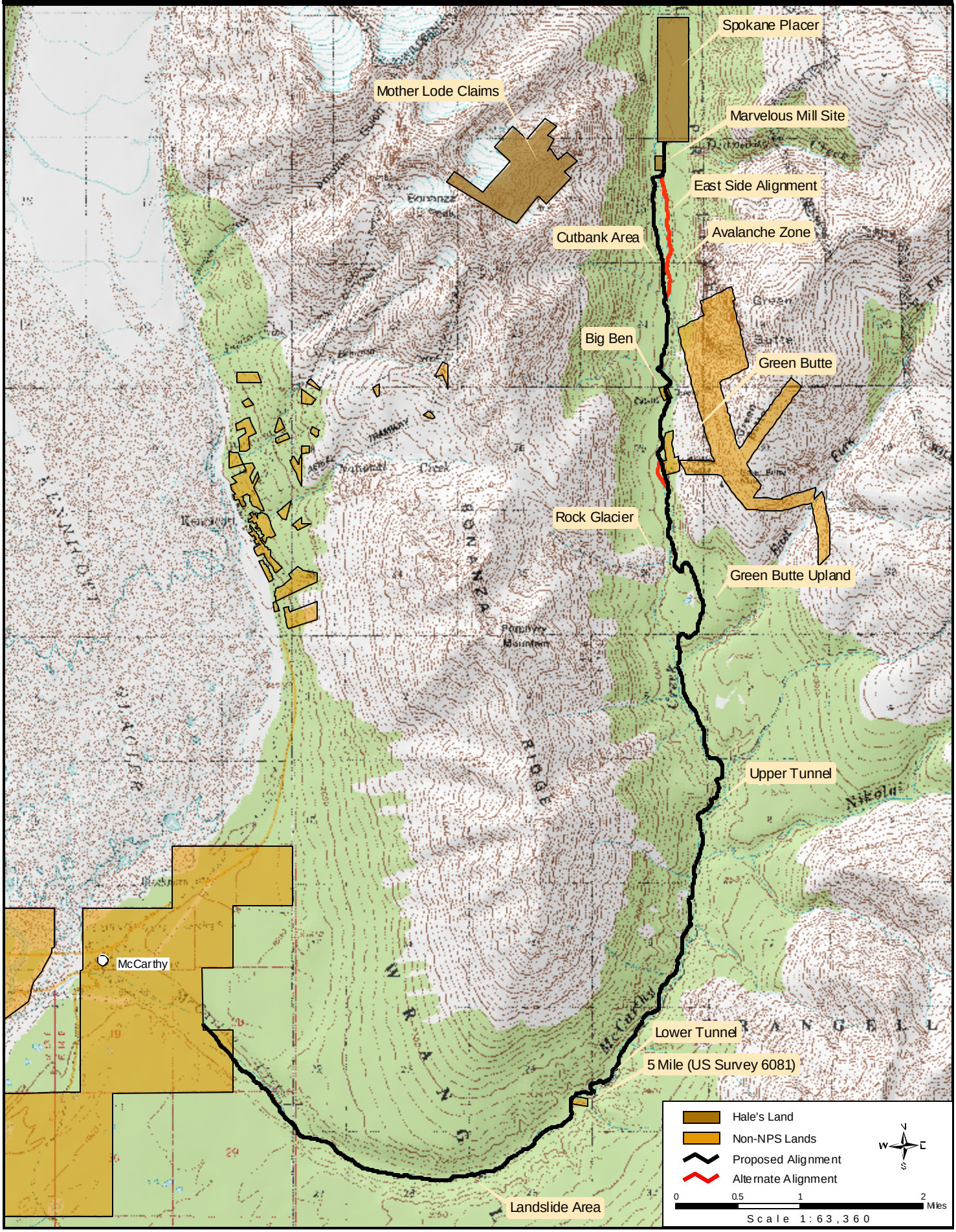
The National Park Service, Alaska Support Office, provided publication services.

Map 1. Location of Project Area



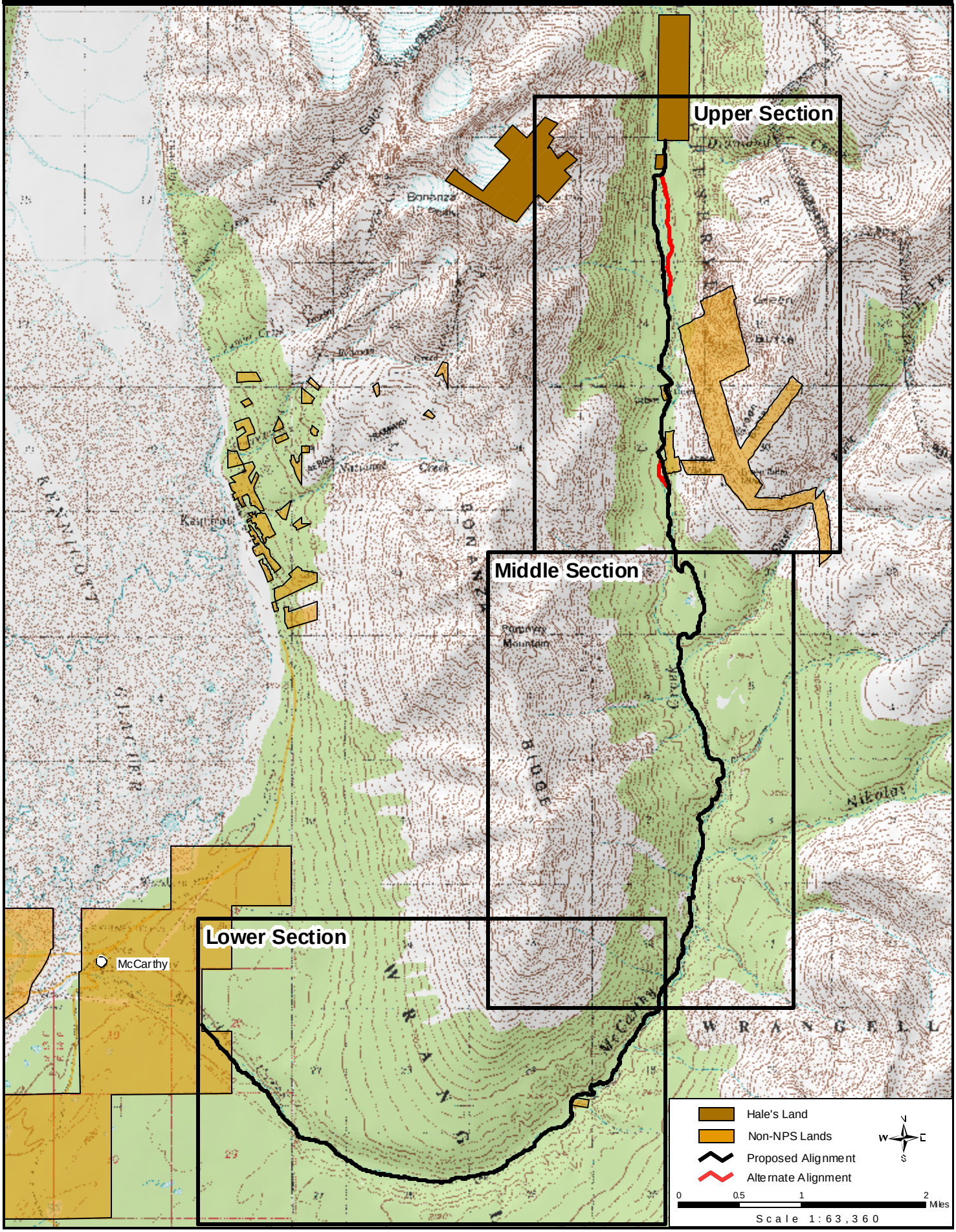
Environmental Assessment, McCarthy Creek Access, Wrangell-Saint Elias NPP; Map Date: 01/12/04

Map 2. Access Alignment Overview



Environmental Assessment, McCarthy Creek Access, Wrangell-Saint Elias NPP; Map Date: 01/13/04

Map 3. Access Alignment Index



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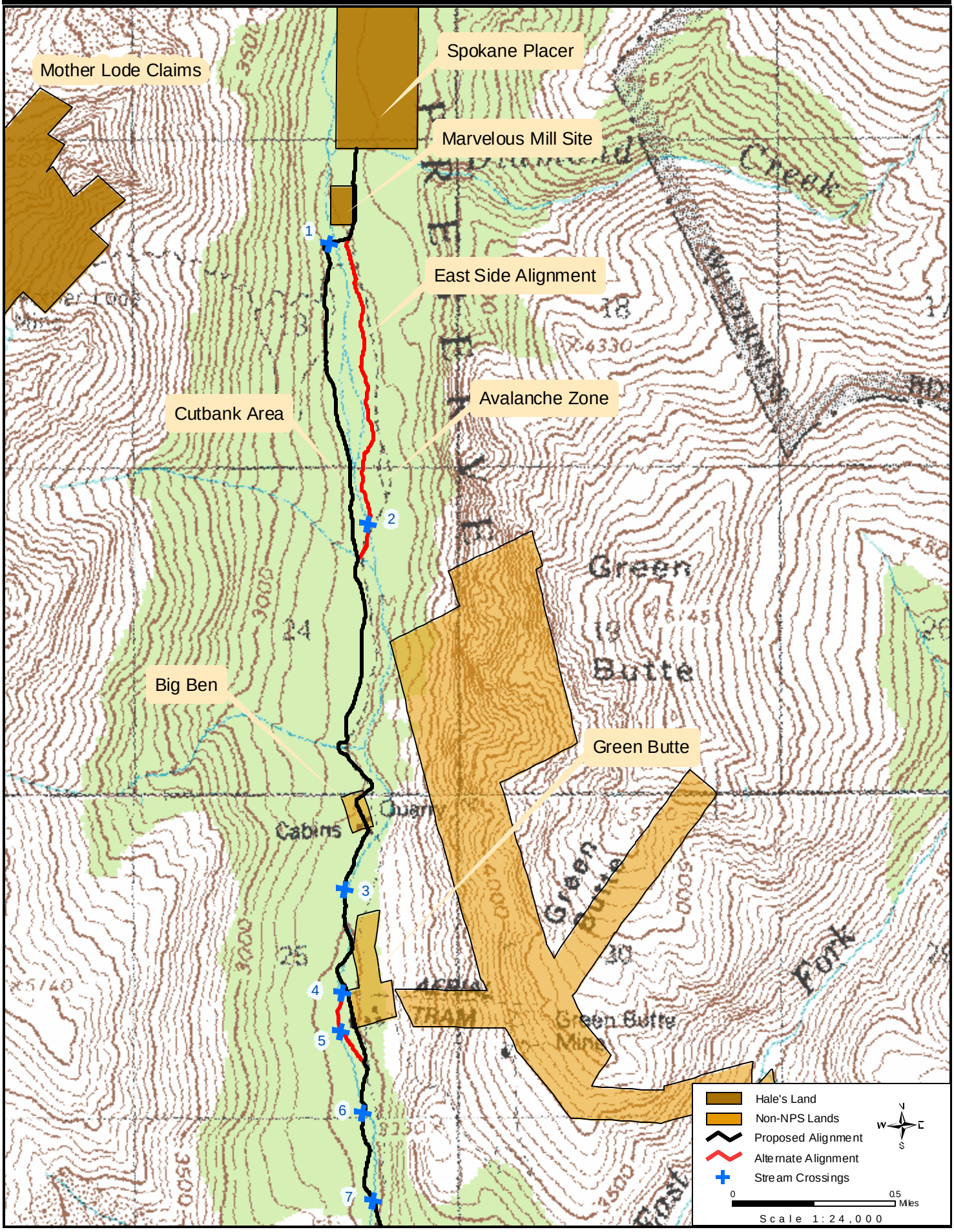
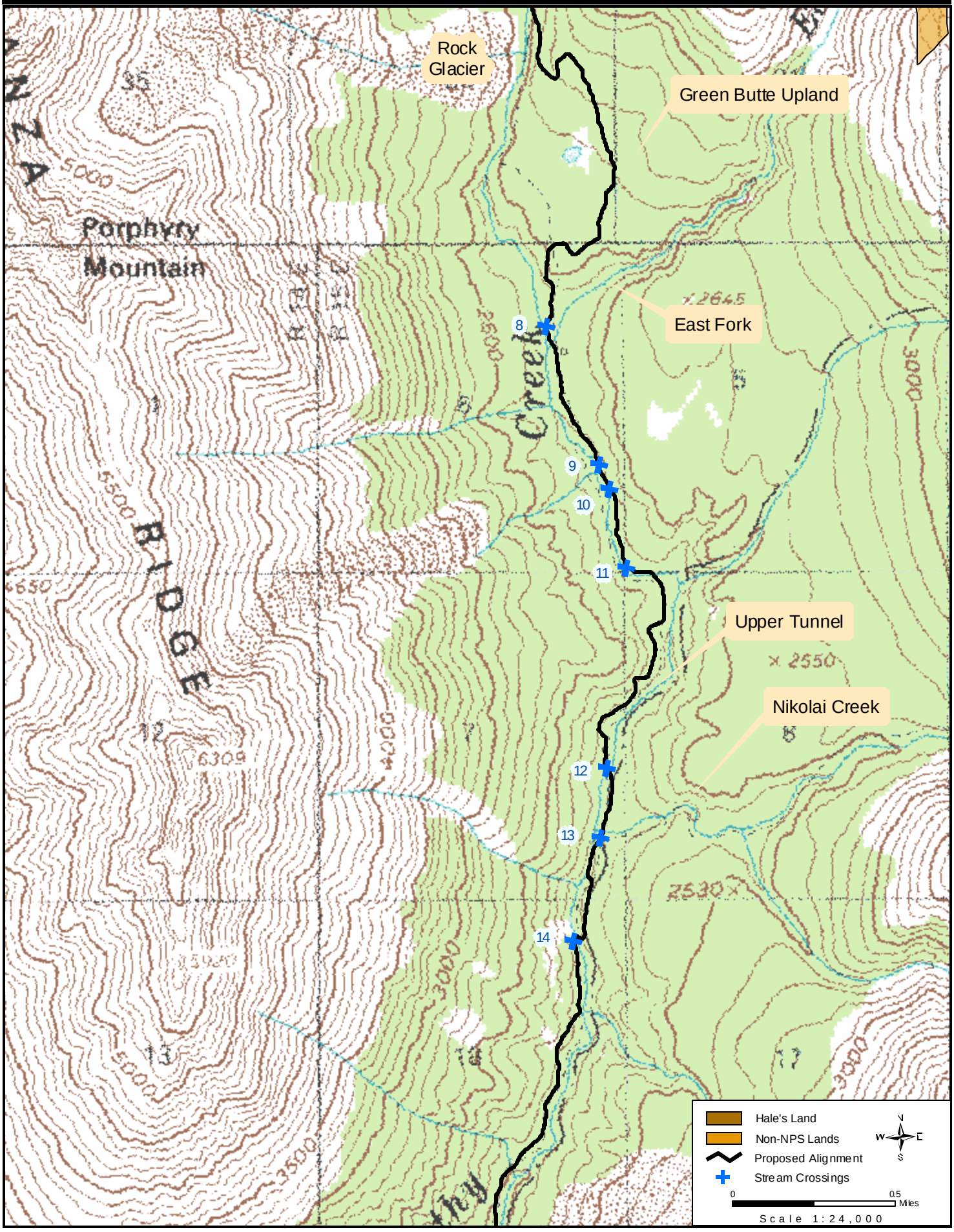
Map 4. Access Alignment, Upper Section



Environmental Assessment, McCarthy Creek Access, Wrangell-Saint Elias NPP; Map Date: 01/12/04

Map 5. Access Alignment, Middle Section



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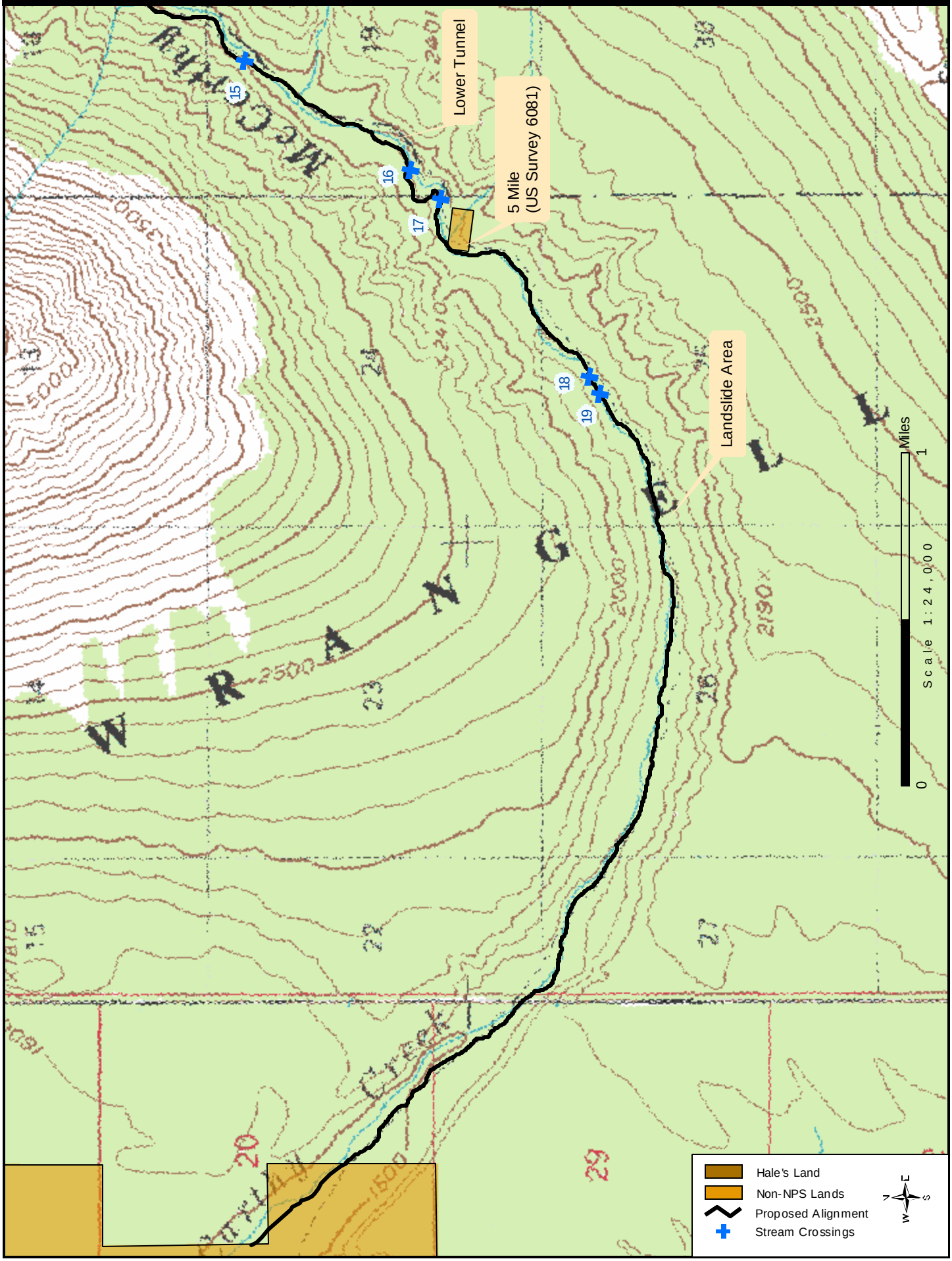
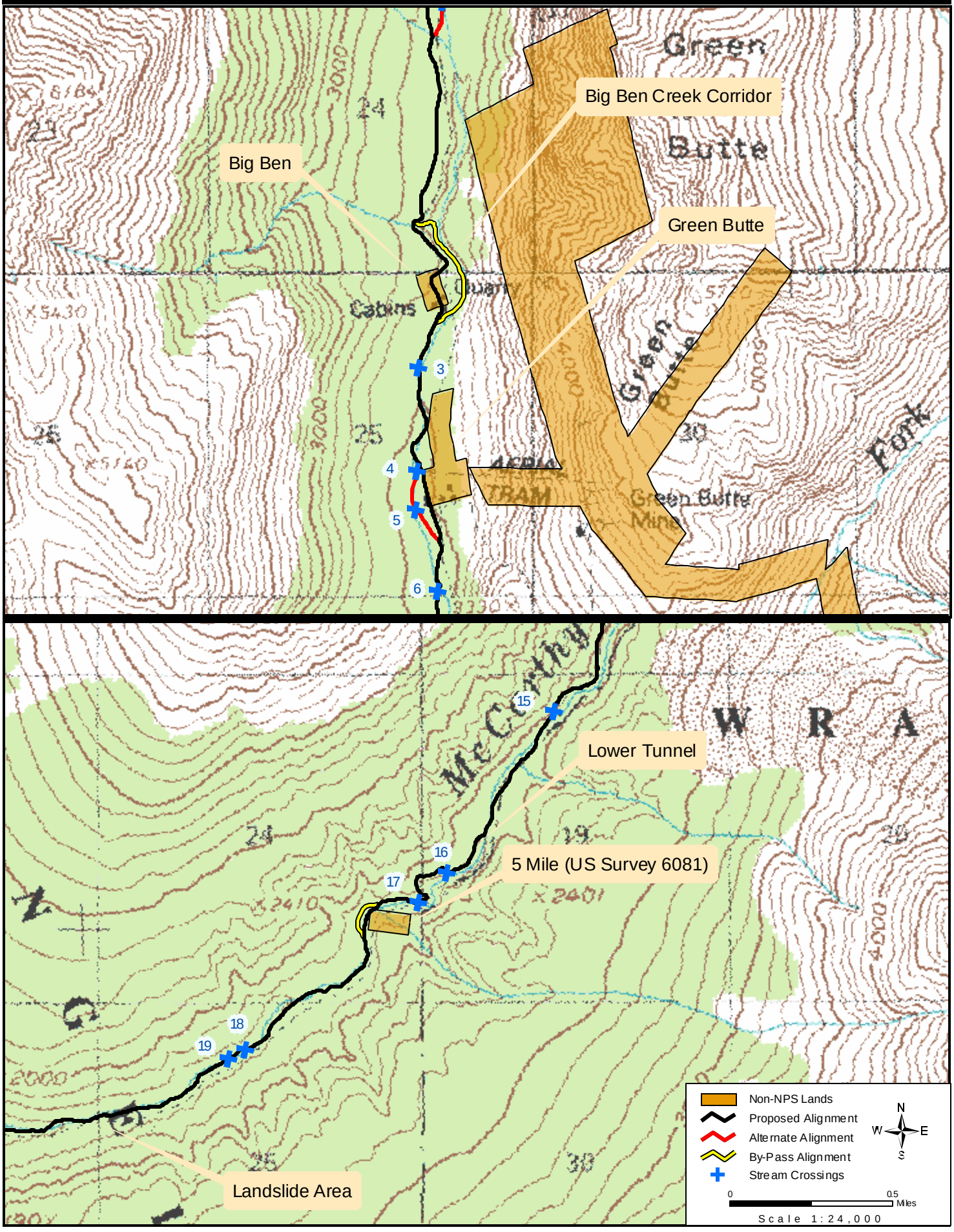
Map 6. Access Alignment, Lower Section



Environmental Assessment, McCarthy Creek Access, Wrangell-Saint Elias NPP; Map Date: 01/12/04

Map 7. Bypasses Around Big Ben and 5 Mile (US Survey 6081)



Environmental Assessment, McCarthy Creek Access, Wrangell-Saint Elias NPP; Map Date: 01/13/04